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at the annual meeting

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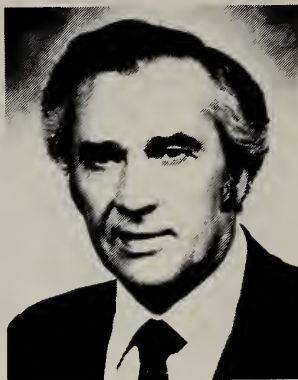
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## AT THE ANNUAL MEETING

- On the cover** **Pondering the issues: in the foreground, Dr. Robert L. Wood, Richmond; at right, Dr. G. Edward Calvert, Lynchburg; left, Dr. Robert M. Allen, Falls Church**
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## Everyone in favor say Aye

EVERYTHING WAS UP-TO-DATE at the annual meeting in Williamsburg. Wherever Medical Society of Virginia members gathered, all the trendy topics were under discussion—pars and non-pars, lump-sum payments, seat belts, HMOs and CONs, mandatory assignment, drunk driving, PADs and PMIs, plus myriad other current and recurrent issues impinging on the practice of medicine in Virginia.

Here is how the House of Delegates handled the recommendations on these and other subjects. Speaker Richard L. Fields skillfully guided the delegates through the agenda, his resourceful wit bringing conviviality to the proceedings,

and Vice Speaker William H. Barney gave a strong assist.

### Reimbursement

Now that Medicare's diagnosis-related system of hospital reimbursement is in place, Washington officials are casting an eagle eye on physicians' fees.

Item: Spliced into the 1984 Budget Deficit Reduction Act are provisions decreeing that increases in actual charges by non-pars during the current freeze will not be recognized in determining those doctors' customary charges after the freeze.

From the Vanguard Committee, Dr. J. Hayden Hollingsworth, Roanoke, chairman, came a resolution arguing that the act's provisions not only discriminate against non-pars but interfere with the rights of all concerned to contract with one another. Reference Committee Two, of which Dr. Hollingsworth was chairman, joined in that opinion and recommended adoption of the resolution. The delegates followed suit with alacrity, ordering The Medical Society of Virginia to support the American Medical Association's efforts to have these provisions revoked.

Item: The House was also foursquare against proposals by the Health Care Financing Administration to combine into a single payment Medicare's Part A, which reimburses physicians, and Part B, which reimburses hospitals. Such lump-sum reimbursement would in effect make doctors employees of hospitals, said the Vanguard Committee's resolution, and would thus

*All the text in this section was written by Ann Gray, Executive Editor, and all the photographs are the work of Thomas L. Williams.*



Dr. Leroy J. Essig (left) and Dr. Gerald A. Bellotti, delegates from the Fredericksburg Area Medical Society

# VS BUREAU

undermine the independence of practitioners.

The delegates concurred and asked the Society to oppose any such single-payment scheme and to urge AMA members to oppose it.

Item: Congress is talking about imposing on physicians mandatory acceptance of Medicare assignment, and the delegates registered vehement opposition to this idea, too. Said the adopted resolution: "RESOLVED, that The Medical Society of Virginia work with the American Medical Association to oppose mandatory assignment legislation in the United States Congress; and be it further RESOLVED, that the Society act in concert with the AMA to educate the public and state and federal legislators to the dangers of enacting such legislation."

Item: Yet another change being bruited about by both state and federal legislators would tie participation in payment programs to hospital staff privileges.

Again the House registered unanimous disapproval of any such meddling with the physician's time-honored independence by adopting another recommendation.

## Certificate of Need

As a means of lowering Medicare costs, the Health Care Financing Administration initiated a reimbursement plan to encourage the formation of ambulatory surgery centers, but Virginia physicians applying for the requisite certificate of need to establish ASCs have found the procedure discouraging.

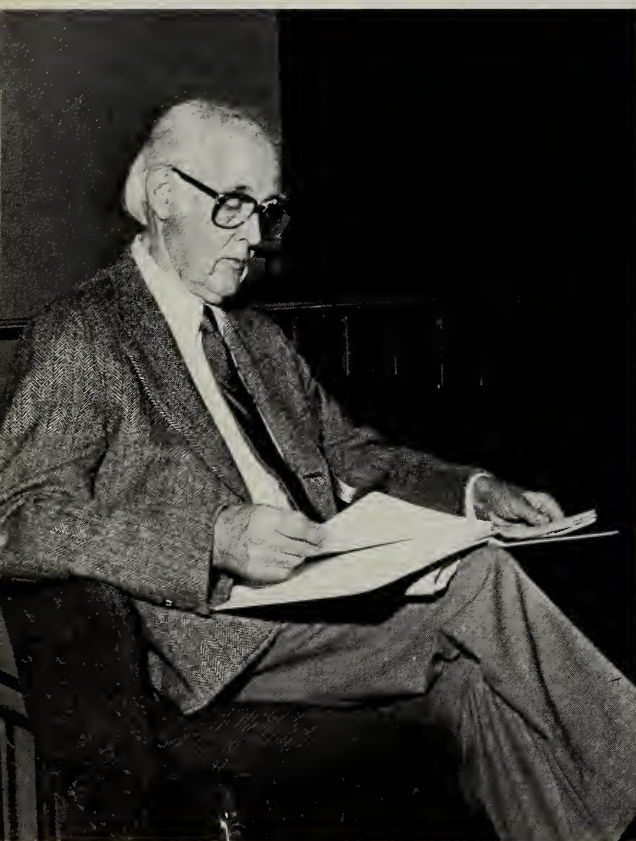
One doctor, Dr. C. M. Kinloch



Dr. William A. Shelton, Boydton (left), and Dr. Peter W. Squire, Emporia, of the Southside Virginia Medical Society



**Dr. Harry A. Mangold, Fairfax (left), Specialty Section delegate from the Virginia Society of Anesthesiologists, and Dr. Warren E. Johnson, Jr., Purcellville, Loudoun County Medical Society delegate**



**Dr. Theron B. Childs, White Stone, of the Northern Neck Medical Association**

Nelson of Richmond, applying on behalf of himself and his six associates in urology, won permission for such a facility last year, but it was a hard-won victory (*cf* Va Med 1983;110:646-654), and subsequent CON applications for freestanding surgery installations have not been granted (*cf* Va Med 1984;111:535), including a petition from Dr. Nelson for a second, multispecialty ambulatory surgery center.

Apprised of the repeated denials, The Medical Society of Virginia's Council recommended that the House of Delegates endorse amending Virginia's certificate of need laws to exempt ambulatory surgery facilities. On affirmative referral of the recommendation by Reference Committee Two, the delegates gave that endorsement unanimously.

Of two other recommendations relative to certificate of need, one foundered and the other was altered by the House. A supplemen-

tal report from the Legislative Committee recommended CON exemption for home health services, but Reference Committee Two "did not believe it had sufficient information" to refer the suggestion affirmatively, and the House followed that lead by not adopting. Nor did the reference committee favor adopting a recommendation from the Arlington and Fairfax Medical Societies asking for repeal of the entire certificate of need law. Such a request is "premature," said the committee, and it registered concern about the impact of repeal on community hospitals in small localities.

From the floor came agreement with the committee's concern, and another delegate rose to admonish the House that the recommendation was a useless tilting at windmills.

"I don't like the certificate of need laws any better than anyone else," he said, "but you know very well the legislators aren't going to repeal this law."

The original CON artist himself then took the microphone to offer an idea out of his experience. "I think we ought to stay flexible," said Dr. Nelson. "We've gone on record before as opposing the certificate of need laws. Why don't we simply reaffirm our opposition?" The delegates liked this approach and voted to make it official.

## **HMOs**

In Norfolk, Blue Cross Blue Shield of Virginia has seeded an HMO that may eventually be a pearl in its projected statewide chain but meantime is something of an irritant to local physicians. It's a closed-panel HMO, called "HMO Plus," with the doctors of the Norfolk Diagnostic Clinic signed up to provide care for subscribers (*cf* Va Med 1984;111:180-183).

The rub is that the carrier enjoys exemption from Virginia's tax on

insurance premiums. As a result of this "privileged status," said a resolution from the Norfolk Academy of Medicine, Dr. Frank W. Gwathmey, president, the carrier "has the market power to adversely affect the ability of excluded physicians to compete for patients." The resolution concluded by asking The Medical Society of Virginia to oppose the use of tax-exempt funds for the establishment of any closed-panel HMO and to petition the General Assembly for "legislative relief from such unfair competitive practices."

This resolution evoked prolonged debate in Reference Committee Two's hearing, with arguments pro (for instance, Dr. Russell D. Evett of Norfolk) and con (for instance, Dr. Oscar A. Thorup, Jr., of Charlottesville). Those against the resolution emphasized the beneficial effects of competition. Those in favor decried the restriction of patient choice.

Reference Committee Two came down on the side of the resolution, recommending its adoption. The delegates followed suit, approving the measure as written.

From the Albemarle County Medical Society, Dr. William A. Orr, Charlottesville, president, came a sibling resolution. Since the Virginia Blues are exempt from the tax on premium income, the resolution postulated, why not exempt all other commercial carriers who can match or exceed the monetary value of the public services through which the Blues justify exemption? This, asserted the framers of the resolution, would place all carriers under the same rules and thus promote competition.

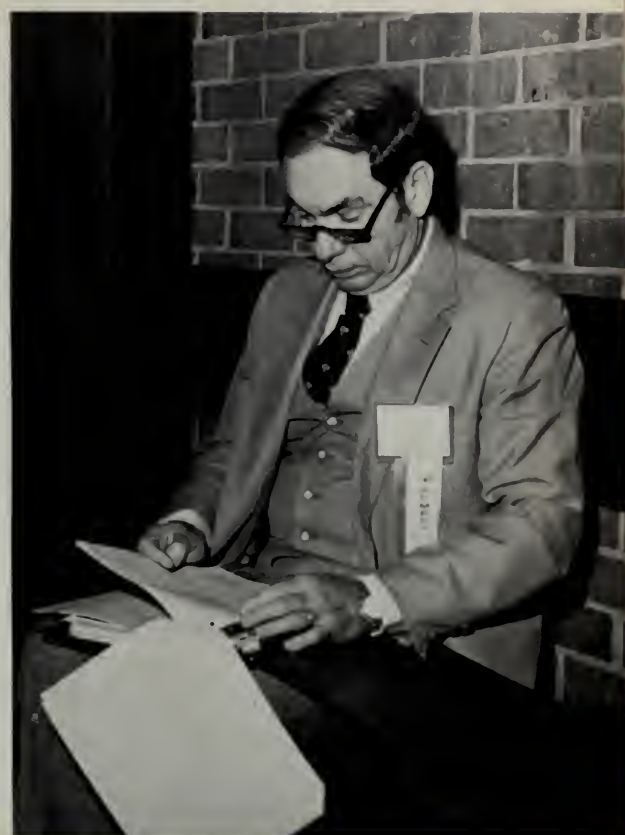
The reference committee balked. First, the committee said, further study is needed to figure out how to determine eligibility for exemption. Second, the committee was highly skeptical that the legislature would

countenance the ensuing loss of tax revenues. The committee liked the concept but asked the delegates to refer the proposal to the Legislative Committee, Dr. Percy Wootton, Richmond, chairman, for evaluation of its feasibility, and the House adopted the recommendation to so refer.

### Disciplining Doctors

Virginia's method of disciplining doctors took some heat recently when the Roanoke Times & World-News published a series of articles delving into the disciplining of Virginia physicians who break the law. Written by Douglas Pardue and Charles Hite in the investigative manner and titled "Who's Watching the Doctors?", the series retold the sad stories of a handful of Virginia practitioners whose alleged aberrations were big news when first reported and lost nothing in the retelling. The series also described in detail the entire disciplinary mechanism, in which the Board of Medicine, the Attorney General's office, the courts, and the Department of Health Regulatory Boards play key roles, and other agencies contribute.

The two reporters questioned various aspects of the system—for



**Dr. Darrell K. Gilliam, delegate from the Richmond Academy of Medicine**

instance, that disciplined doctors move to another state and resume practice with no one the wiser, and charged that there aren't enough investigators and support staff either to monitor physicians the Board has chastised or to locate all the miscreants that should be disci-

## MSV named official reviewer

The Medical Society of Virginia has been designated by the Department of Health and Human Services as Virginia's official professional review organization. The contract was won after protracted negotiations under the leadership of Dr. Robert A. Morton, Norfolk, chairman, who was commended by Reference Committee Two. "While physicians will have to adjust to the new peer review regulations," the committee observed in its statement to the House, "your reference committee takes comfort that quality of patient care" is more likely of major consideration when reviews are conducted by the Medical Society of Virginia Review Organization. Dr. Eugene F. Poutasse, Nellysford, was named medical director of the new MSVRO by its 17-member board of directors.

Not all state societies have been successful in landing the peer review contracts; two of the largest, California and Michigan, lost out to commercial bidders.

plined. In sum, they said, the Board could use some help.

If the Board needs help, it should have it, said Reference Committee Two, which amended a supplemental report from the Legislative Committee to recommend that incoming MSV President Harry C. Kuykendall appoint an ad hoc committee to study the matter. The committee is to consist of one physician from each congressional district; representatives from the Board, the Attorney General's office, the Department of Health Regulatory Boards, and the health committees of Virginia's House and Senate; and two citizens. The new committee should be instructed to report to the MSV Council at its January 1985 meeting, the recommendation specified.

The timing of the report seemed to the assembled delegates to pressure the proposed committee unduly, and they voted to amend by asking for the report to Council "as expeditiously as possible." Thus satisfied with the recommendation, they endorsed it.

### New Leadership

Dr. Charles M. Caravati, Jr., Richmond, headed the Nominating Committee's slate of officers as President Elect and was confirmed in the post by unanimous vote of the House of Delegates. Three new vice presidents were elected with him: Dr. Joseph H. Early, Jr., Hillsville; Dr. William W. S. Butler, III, Roanoke; and Dr. Ira J. Green, Alexandria. Dr. Richard L. Fields, Fairfax, was reelected Speaker of the House; Dr. William H. Barney, Lynchburg, was reelected Vice Speaker; and James L. Moore, Jr., was reaffirmed as Executive Vice President.

From Port Huron, Michigan, to the meeting came Dr. John L. Coury, Jr., chairman of the AMA's Board of Trustees, to install as the Society's President Dr. Harry C.

Kuykendall, Alexandria, and to address the House at its opening session.

Two new councilors appeared on the slate and were elected for two-year terms: Dr. Frederick K. McCune, Virginia Beach, representing the 2nd district, and Dr. J. Hayden Hollingsworth, Roanoke, 6th district. The list of vice councilors, all elected for one-year terms, included three new names: Dr. Russell D. Evett, Norfolk, who previously has been 2nd district councilor; Dr. Eugene R. Lareau, Harrisonburg, 6th district; and Dr. Antonio M. Longo, Alexandria, 8th district.

Dr. John J. Krueger, Virginia Beach, headed the Nominating Committee as chairman.

### Allies

The print media has also carried reports recently having to do with nurse midwives, who at a recent hearing by the Department of Health Regulatory Boards complained about the regulations under which they practice. Certified nurse midwives are specialized nurse practitioners, and according to the regulations as outlined by the Joint Committee of the Virginia Boards of Medicine and Nursing, every practitioner is to be under the "supervision and direction of a licensed physician." The testifying midwives complained that it's unfair for them to be subjected to such scrutiny since the same isn't required of all nurse practitioners.

The House, on recommendation of the Maternal Health Committee, Dr. Lucien W. Roberts, Jr., Halifax, chairman, registered approval of midwifery only under the direct supervision of an obstetrician-gynecologist with active staff privileges at a JCAH-approved hospital and asked hospitals to develop bylaws regulating nurse midwife privileges and requiring physician supervision. *continued page 10*



Here are the new Medical Society of Virginia officers reported in the far left column. Seated, President Kuykendall. Behind him are, left to right, Vice Presidents Green and Early; President Elect Caravati; Vice Speaker Barney; and Speaker Fields. Vice President Butler was not present.



**3rd. Qtr. '84**  
**173,029**

**2nd. Qtr. '84**  
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**4th. Qtr. '83**  
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**July 1, 1983**

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Dr. C. Barrie Cook (left), the plaque, and Dr. Kinloch Nelson.

Allied professionals in another field were addressed by a recommendation from the Sports Medicine Committee, Dr. Robert P. Nirschl, Arlington, chairman, that The Medical Society of Virginia oppose any legislation allowing individual practice of physical therapy. Adoption of the recommendation was endorsed by Reference Committee Three, Dr. Antonio M. Longo, Alexandria, chairman, and the delegates found no fault with it, voting to adopt.

Fielded by Reference Committee One, Dr. Delosa A. Young, Fair-

fax, chairman, was a recommendation from the Joint Practice Committee, the Society's liaison with the Virginia Nurses Association. Under the chairmanship of Dr. C. H. Townes, Colonial Heights, the committee's recommendation sought enhanced cooperation between the two professions through the initiation of joint practice committees at the community level. The proposal was promptly approved by the delegates, who asked The Medical Society of Virginia to find a way to set the local committees in motion.

### Commendations

With praise for Dr. C. Barrie Cook's vigorous leadership, the Membership Committee, Dr. J. Thomas Hulvey, Abingdon, chairman, asked the House of Delegates to confer honorary lifetime membership on the retiring President, and the delegates readily agreed.

To read Dr. Cook's Presidential Address, turn to page 54.

For other House actions on membership, see page 17.

To see the recipient of the Physicians Award for Community Service, turn to page 19.

Special awards honored two long-time friends of the Society during the House's second session in the Williamsburg Conference Center's auditorium.

First, Speaker Fields called to the podium Edgar J. Fisher, Jr., who retired last year after 36 years as director of the Virginia Council on Health and Medical Care, the agency known especially for its highly effective physician placement service. Receiving the plaque setting forth the Society's debt of gratitude to him, Mr. Fisher replied with characteristically modest demurrals. He didn't really deserve the recognition, he said; the big credit for the Council's success belonged to the continuing support of The Medical Society of Virginia. With their applause, the delegates reiterated their appreciation.

Next, at Dr. Cook's request, Dr. Kinloch Nelson walked down the aisle and up the stairs to center front of the lighted stage. At 81, Dr. Nelson has stood center front of medical education in Virginia for a long time, notably as dean of the Medical College of Virginia's School of Medicine (1963 to 1971) and for the past six years as Director of Continuing Education for The Medical Society of Virginia. Now he's retiring, taking with him the intellectual honesty and pithy wit that have made him the salt of Virginia medicine.

Plaque in hand, Dr. Cook read out its tribute, concluding, with "... our deep appreciation for his distinguished contributions as physician, educator, and administrator. And friend," Dr. Cook added. Dr. Nelson moved to the microphone.

"I don't feel the way Edgar Fisher did," he said crisply. "I think this award is richly deserved."

A giant roar of laughter erupted, and the delegates rose to their feet with an avalanche of applause that followed Dr. Nelson's dapper fig-



In the Exhibit Hall, Dr. Gregory A. Fortier, Charlottesville (right), with the W. B. Saunders rep, Ray Piercy. A delegate to the new Resident Physicians Section, Dr. Fortier is in training at the University of Virginia.



At the United States Army Medical Department's booth, Dr. Philip Thomason, Portsmouth (left), with Capt. Darrell E. Stafford



**Dr. Carrington Williams, Jr., Kilmarnock, on the Golden Horseshoe's driving range. For the winners of the golf tourney, see page 21.**

ure all the way back to his seat at the rear of the hall.

## **Malpractice**

At the General Assembly last year, Virginia's legislators introduced four bills designed to tinker with the malpractice laws, all four unfriendly to medicine. In response, The Medical Society of Virginia suggested to the legislature that it set up a joint subcommittee to study Virginia's malpractice system in general and the proposed bills in particular. The lawmakers accepted the suggestion, the bills were thus automatically carried over to the session beginning this month, and the subcommittee set about holding a series of public hearings (*cf* Va Med 1984;111:590-591).

To keep a weather eye on the subcommittee's proceedings, President C. Barrie Cook appointed an ad hoc committee with Dr. Ronald K. Davis, Richmond, as chairman. In the company of the Society's legal counsel and actuary, plus reps from the pertinent carriers, the study committee has met repeatedly to develop information and testimony.

To the House from the Richmond Academy came a resolution asking that the Society 1) importune the General Assembly to extend the life of its subcommittee and 2) continue the ad hoc study committee. The reference committee unhesitatingly recommended adoption of the resolution and the House unhesitatingly obliged.

A scant four days later, at 7 AM in a Richmond hotel, Dr. Davis and his study committee were at it again. The subject was no-fault insurance, and from Charlottesville, where he is professor of law at the University of Virginia, had come Jeffrey O'Connell, who is nationally renowned for his key role in devising no-fault auto insurance and believes the no-fault mecha-

nism can be applied to malpractice insurance. Professor O'Connell shared his ideas on it with the study committee and afterwards promised to discuss his concept in detail in an original article for *Virginia Medical*. Watch for it.

The House was also quick to authorize continued life for a program that encourages Virginia physicians to sign up for a day at the capitol; there, guided by staff from The Medical Society of Virginia and the Richmond Academy of Medicine, they visit their senators and delegates and sit in on Senate and House committee hearings.

The program got off to a fine start in 1984, with 40 physicians visiting the legislature (cf *Va Med* 1984;111:268-277). All were fascinated to watch their legislature in action, and the legislators were delighted to meet their doctor-constituents and get their points of view.

### Belts and Blood Levels

Now that automotive restraints for kiddies are required in Virginia, there's agitation to mandate restraints for everyone. Two recommendations on the subject were forwarded to the House, one from the Highway Safety Committee and one from the Arlington and Fairfax County Medical Societies. Dr. Robert G. Bullock, Arlington, and Dr. William L. Rich, III, Falls Church, presidents.

The delegates elected to go with the committee's version, which read, "RESOLVED, that The Medical Society of Virginia support legislation that would mandate the use of seat belts by drivers and passengers in vehicles required by law to contain seat belts." The House also recommended that all holders of learner's permits be required to use seat belts, too.

Drunk driving continues a major concern of the Highway Safety Committee, and it asked the dele-

## Membership survey surprises

"You're doing fine. Keep on doing it."

That was the majority opinion of the Medical Society of Virginia members who responded to a survey asking them how they feel about the return on their dues. "Competent, effective" was typical of the affirmative comments made by 78% of the responders.

The survey was commissioned by the Long Range Planning Committee, Dr. William J. Hagood, Jr., Clover, chairman. The committee is composed of The Medical Society of Virginia's five most recent past presidents, who were not expecting the vote of confidence.

"We were flabbergasted," Dr. Hagood said. "We sent the survey with fear and trembling, not knowing what kind of answers we'd get."

The committee was pleased with the size of the response, too—2,559 members responded. That's 39% of the total MSV membership and 44% of all dues-paying members. Two-thirds of those responding answered either "benefits of organized medicine" or "obligation to support organized medicine" when asked why they had joined. The survey's data indicate that most of the responders participate in the Society's activities, but the questionnaire was so designed that much of the information can be interpreted to apply to the membership as a whole.

The responders were decidedly in favor (86%) of the Society's efforts to work with and monitor the alternative delivery systems that are springing up in Virginia; they endorsed (75%) the new

Society-sponsored peer review organization described on page 5; and 68% want organized medicine to develop its own versions of such new systems as prospective payment.

The responses show strong support for Society-sponsored insurance plans. The professional liability program is an important benefit of membership, said 76%. When asked the same question about the Society's health insurance program, an even larger number, 83%, answered Yes, it's important; oddly, however, only 35% said they are enrolled in that program.

The Society's most important function, according to the answers of 90% of the responding physicians, is organized support and lobbying. Although 53% of them went on record as being willing to testify before legislative committees and regulatory bodies, only 29% of the responders belong to VaMPAC.

Of the responding physicians themselves, the survey showed that 27% of them are members of an HMO, a PPO, or some similar plan; that about half of them practice solo and half in a group; and that only 16% practice in what they consider a rural area.

The survey concluded with some questions about *Virginia Medical*.

Do you think the journal's current approach is fine? (Yes, said 47%), or do you feel its content "should concentrate more on the non-scientific as-Virginia?" (35% said Yes).

Then came the clincher. "Do you read *Virginia Medical*?" Yes, said 92%. The Editors were flabbergasted.

*continued page 17*

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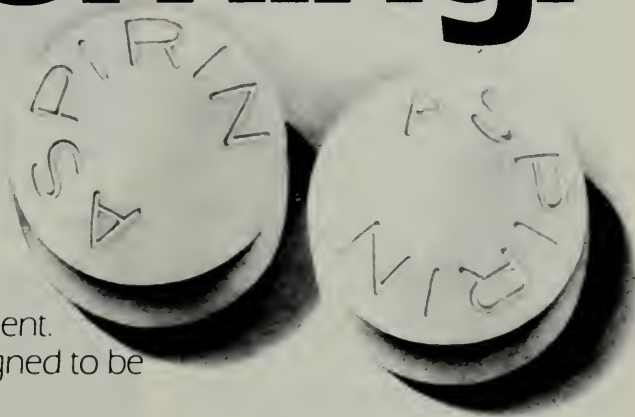
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## Doctors' doctor draws crowd

An estimated 250 physicians turned out at the annual meeting to hear G. Douglas Talbott, MD, who as program director has made the Medical Association of Georgia's interaction with impaired physicians a national model. He appeared on the scientific program under the sponsorship of the Physicians Health and Effectiveness Committee, Dr. William H. Barney, Lynchburg, chairman.

A compelling speaker, Dr. Talbott came on strong with his main message: Do not make the mistake of writing off the physician who is abusing drugs or alcohol as simply weak, or bad, or immoral. His addiction is a disease, Dr. Talbott emphasized, a disease that is "very treatable."

But you have to search out the addicted physician early on, he warned; by the time he or she shows up in the emergency or operating room with altered consciousness, the disease is "very far along."

A 93% recovery rate based on abstinence of at least two years has been registered by the 750 physicians who have been treated under the Georgia program. Dr. Talbott has promised to write an original article for Virginia Medical. Watch for it.

Earlier in the same scientific session, Dr. Larry S. Richter, Charlottesville, presented the paper that won him the annual Medical Society of Virginia House Officer Prize. His paper was titled "Efficacy of Burned Surface Area Estimates—The Need for a Computer-Based Model."



Dr. Malcolm Tenney, Jr., Staunton (left), and Dr. John M. Stirewalt, Waynesboro, delegates from the Augusta County Medical Society



Dr. William S. Dingleline, Richmond, studies the scientific exhibit that won first prize, "Low Dose Fibrinolytic Therapy in Hand Ischemia," by Jaime Tisnado and Shao-Ru Cho, Richmond. One other prize, for second place, went to an exhibit on "Intravenous Antibiotic Therapy in an Ambulatory Setting," by Dr. Robin I. Goldenberg, Dr. Donald M. Poretz, and Dr. Lawrence J. Eron, Fairfax.

gates to endorse reduction in the specified blood alcohol level for automatic conviction of drunk driving from .15 to .10. The House readily approved.

The Child Health Committee, Dr. Jefferson D. Beale, Jr., Danville, chairman, tendered a recommendation relating to drunk driving by adolescents.

The recommendation suggested that the Virginia Code carry an automatic one-year suspension of license when drivers aged 16 to 18 are convicted of driving under the influence. The recommendation also asked that the legal driving age of 16 for Virginians be continued on a provisional basis, with a permanent license to be issued at age

18 and the driving records of these licensees to be reviewed annually. The House was in hearty agreement with these proposals, but took a different view of the recommendation's final provision "that no youth between age 16 and 18 should be allowed to drive between 11 PM and 6 AM." Unnecessary if not unrealistic, the delegates opined, and the provision was stricken.

The Child Health Committee's recommendation for legislation to increase the legal drinking age to 21 for all types of alcoholic beverages was adopted by the House, which hoped, as did the committee, that the change might reduce highway injuries and deaths.

## Day and Nursing Care

From Dr. Robert H. Anderson of Alexandria came a resolution dealing with for-profit day care centers. Reference Committee One made two slight amendments and then recommended that it be adopted. It resolved that The Medical Society of Virginia support continuation of the State Department of Social Services' jurisdiction over day care centers and that the Society study the existing laws and regulations and make them applicable to all day care centers. The House expressed unanimous approval.

Nursing homes were the subject of a resolution from the Danville-Pittsylvania Academy of Medicine, Dr. Girard V. Thompson, Jr., pres-

---

## Dues up, exemption eases, section starts

The House adopted two recommendations that touched the pocketbooks of Medical Society of Virginia members.

On recommendation of Reference Committee Three, the delegates authorized a lift of \$45 in the yearly dues of MSV members, the first raise since 1978. The tab beginning January 1985 will thus be \$195, well below the national average of \$265 for state medical societies. The committee cited the need for "replenishment of capital which has been used for emergencies, to effect the renovation now underway at the headquarters

building," and "to develop studies and programs for which there are no specific allocations in the budget," especially in the areas of legislative activity and public relations. The budget as adopted by the House appears on page 20. Below is the architect's rendering of how the revised headquarters building will look on completion.

For those members approaching retirement age, the dues news went the other way—the threshold for dues exemption granted on the basis of age was lowered by action of the House from 70 to 65 years, with the proviso that the physician must

have been an MSV member for at least ten years prior. The recommendation for this change came from the Bylaws Committee, which also recommended a change stipulating that each member of the House of Delegates must be an MSV member.

The delegates also added another section, that of Hospital Medical Staff, which, the House authorized, is to be composed of one voting medical staff member with clinical privileges from each hospital in Virginia and is to elect one delegate and one alternate delegate to the MSV House each year.



ident, asking that the Society urge the agencies responsible for inspecting nursing homes to revise their requirements of medical providers to render them "reasonable, understandable, and fairly enforced." The delegates were in complete accord with the resolution and adopted it forthwith.

### Drug Use and Abuse

Three recommendations from the Pharmacy Committee, Dr. Gerald C. Burnett, South Boston, chairman, were endorsed first by Reference Committee One and then by the assembled delegates.

One endorsed The Medical Society of Virginia's appointments of these physicians to the four regional committees of the new Medicaid Drug Utilization Review Program: Dr. William H. Robison, Roanoke; Dr. Marietta Grundlehner, Arlington; Dr. H. Thompson Mann, Richmond; and Dr. John C. Schaefer, Norfolk.

Another sought ways to increase voluntary use of the AMA's Patient Medication Inserts, such as a coalition with the state hospital and pharmaceutical associations, and asked The Medical Society of Virginia to encourage its members to print on their prescription blanks boxes that could be checked to authorize a PMI sheet.

The third adopted recommendation asked the House to endorse the concept of the AMA Prescription Abuse Data Synthesis Program, or PAD, and reaffirm MSV opposition to triplicate prescriptions.

### Mental Health Needs

Four areas of perceived need were delineated in its recommendations by the Mental Health Committee, Dr. James Asa Shield, Jr., Richmond, chairman.

The first requested state officials to pursue with vigor improvements in Virginia's public mental hospi-

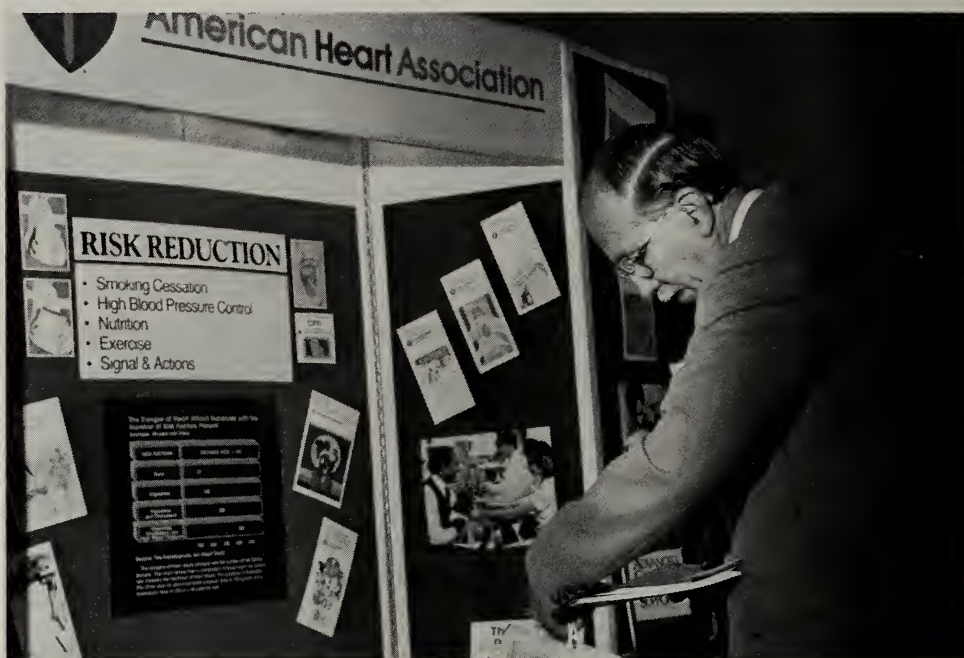
tals to meet JCAH standards and to budget appropriately for such a course.

Another addressed civil commitments for psychiatric care. The Medical Society of Virginia must help the General Assembly see to the highest quality of care for these patients and adequately fund it, urged the recommendation.

Training in child psychiatry at Virginia's three medical schools is

"a critically unmet need," the committee's third recommendation asserted, and it asked the Society to encourage and support ways to mitigate the problem.

"Full appropriate licensure of all personnel" involved in patient care at mental health clinics and hospitals was endorsed by the committee's final recommendation, and it asked state officials to develop plans for such licensure. ■



Dr. William F. McGuire, Pulaski, a delegate from the Southwestern Virginia Medical Society, at the Heart Association's exhibit.



Dr. Paul E. Zehfuss, Alexandria (left), and Dr. John T. Hearn, Penn Laird, who figures in the golf tourney results on page 21.

# WHO'S WHO

To **Percy Wootton**, Richmond cardiologist with a big heart for good causes, The Medical Society of Virginia gave its highest honor, the 1984 Physicians Award for Community Service. Praising Dr. Wootton as "an example to us all," President C. Barrie Cook presented the plaque signifying the award at the Saturday night banquet that concluded the annual meeting in Williamsburg.

MSV members know Dr. Wootton best as one of their past presidents, but in his community he is renowned for his long-time volunteer service to such diverse groups as the youngsters of the Boys Club of Richmond and the oldsters of the Virginia Home. He is on the board of directors of the Science Museum of Virginia Foundation and has been physician to a local chapter of the Boy Scouts. Both the Richmond and Virginia arms of the American Heart Association honor him as a past president.

For his alma mater, Lynchburg College, Dr. Wootton serves as a member of the board of overseers, and the college's alumni association chose him last year for its Thomas Gibson Memorial Award for outstanding service. He is active in a number of local fraternal and civic organizations, and the Seventh Street Christian Church in Richmond has experienced his leadership as an elder and chairman of the board.

Generous contributions of time and intelligence to organized medicine have brought Dr. Wootton many honors, including the presidency of the Richmond Academy of Medicine and the Virginia Society of Internal Medicine. From the

Medical Society of Virginia presidency he moved to the chairmanship of VaMPAC, and he now is chairman of the Society's Legislative Committee, which generated many of the House actions described elsewhere in this issue.

Wherever he is and whatever he is doing, Dr. Wootton seems awfully glad to be alive, but nowhere does he seem more so than at home with his wife, Dr. Jane Wootton, a woman of similarly cheery mien, and his three children, Jane Meredith, Madison, and Anne. He shares with Jane the extensive horticultural needs of their West End home, and he can often be seen bicycling about the neighborhood with his children.

"An uncommonly fine person . . . honorable, sincere, trustworthy, and kind," Dr. W. T. Thompson, Jr., one of his preceptors at the Medical College of Virginia, said of him in this journal on

his accession as MSV president (Thompson WTjr: Salute to President Wootton. *Va Med* 1980;107:862-864).

Percy Wootton adds great luster to the group of 21 physicians who have received the award since it was established in 1963.

The golf tourney at The Medical Society of Virginia's annual meeting was a battle of champions, with **Dr. Richard A. Bendall, Jr.**, Madison Heights, edging out **Dr. John T. Hearn**, Penn Laird, for lowest gross. Winner of the State Open in 1970, Dr. Bendall is a threat in any tourney he enters. Dr. Hearn has won the Society championship so many times in the last decade that he's lost count—"six or seven times," he thinks.

**Dr. Joseph D. Cauthen**, Norfolk, carded the lowest net, followed closely by **Dr. Eugene B. Noland**, Roanoke. Prize for the longest putt went to **Dr. Victor Guerrero**, Manassas, and for the shot closest to the pin to Dr. Bendall.

In the tennis tourney, **Dr. Louis B. Massad**, Fredericksburg, took first prize, and **Dr. Juan M. Montero**, Chesapeake, came in second.



Dr. Percy Wootton (left) photographed in 1980 with Gov. John N. Dalton (center) and Sen. John W. Warner (right). Behind them, Dr. M. Pinson Neal, Jr.

# Beyond the Thirtieth Day

You conclude that your patient should spend some time in a psychiatric hospital. More than a little time, given the nature of this particular problem.

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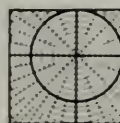


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# Vibrio Vulnificus Revisited

**I**N ADDITION to the case discussed in the accompanying Grand Rounds, we had the opportunity to diagnose and treat a second case of *Vibrio vulnificus* at Rappahannock General Hospital one month later.

An 88-year-old lady with known metastatic breast carcinoma presented with fever, chills and malaise less than 24 hours after an injury from the dorsal spine of a fish to the palmar surface of her left hand. She had obvious cellulitis and lymphangitis on her left hand, and she noted transient nausea, vomiting and non-bloody diarrhea. Although her wound and stool cultures were negative, one of two blood cultures grew *Vibrio vulnificus*, confirmed at the Center for Disease Control. The patient improved rapidly with intravenous chloramphenicol and tobramycin. Of note is the fact that the patient was subsequently found to have liver disease on the basis of her metastatic disease.

The clinical, microbiologic and epidemiologic characteristics of *Vibrio vulnificus* infections are gaining widespread attention<sup>1-3</sup> and should be of great interest to Virginia physicians due to its presence in the Chesapeake Bay.<sup>4</sup> Of the halophilic vibrio organisms, *Vibrio Vulnificus* is clearly the most virulent, with a mortality rate of about 50% in the septicemic patient even when diagnosed and treated early, particularly in the patient with a chronic disease. The diagnosis should come to mind whenever the physician encounters during the months of May—October a patient who has an unexplained septicemia or wound infection after either recent exposure to saltwater or ingestion of raw seafood.

Of added significance would be the history of an underlying chronic disease, such as liver disease, with the associated symptoms of a mild gastroenteritis. Although it is stressed that *Vibrio vulnificus* does not usually cause a gastroenteritis, both of our cases had symptoms and one had stool cultures positive for the organism. Blake's<sup>5</sup> initial series noted that vomiting occurred in 21% of septicemic patients and in 20% of wound infections, where-

as diarrhea occurred in 17% of septicemic patients and was not described in patients with wound infections. We feel that the symptoms of gastroenteritis may provide an important clue that one is dealing with a *Vibrio vulnificus* infection. We also feel that the distinction between primary septicemia syndrome and wound infections is not as clear as was once thought.<sup>3,6</sup>

It would be advisable to be sure that the microbiology section of your lab is acquainted with the proper culture media for stool for the halophilic vibrios, e.g., TCBS agar, and that the technicians do not confuse *Vibrio vulnificus* with *Vibrio parahaemolyticus*, *Pseudomonas aeruginosa*, *Aeromonas hydrophila*, *Plesiomonas shigelloides* and *Serratia marcescens*.<sup>5</sup> We anticipate that *Vibrio vulnificus* infections will be described more often as physicians gain experience and have a higher index of suspicion. It seems prudent to warn patients with chronic illnesses to avoid ingesting raw seafood and to report any salt-water-related injuries or wounds.

ROBERT R. HOYT, MD

CARY N. D. FISHBURNE, MD

PO Box 1599

Kilmarnock, Virginia 22482

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# Grand Rounds: Infections Due to Halophilic Vibrios

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From the Department of Internal Medicine,  
Medical College of Virginia/Virginia Commonwealth University  
Case Presentation by Barry Waters, MD  
Discussion by Sheldon M. Markowitz, MD

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## CASE PRESENTATION

DR. BARRY WATERS: A 75-year-old white male was transferred to the Medical College of Virginia Hospital from Rappahannock General Hospital for treatment of presumed gram-negative septicemia. He was well until four days prior to transfer when he developed acute onset of pain in his left forearm. Two days prior to transfer, the patient developed profuse, watery, non-odorous diarrhea, fever and shaking chills. He was seen as an outpatient, noted to have bullous lesions on his left forearm, and given oral fluids to prevent dehydration. He failed to improve and was admitted to Rappahannock General later the same day. On admission his blood pressure was 70/40, pulse 120 per minute, respiratory rate 30 per minute, and oral temperature 38°C. Physical examination revealed cool, clammy and mottled skin; an edematous left arm with several large bullous lesions; multiple ecchymoses over both arms; bilateral basilar rales; clinical findings compatible with long-standing rheumatoid disease;

and cyanotic toes. He was confused, but his neurological examination revealed no focal deficits. The following laboratory results were obtained: white blood cell count of 18,100 with a "left shift", normal serum electrolytes except for a chloride of 112 meq per liter and a bicarbonate of 15 meq per liter with an anion gap of 27; BUN 39 mg per dl; serum creatinine 3.9 mg per dl; arterial blood gases PO<sub>2</sub> 71 mm Hg; PCO<sub>2</sub> 27 mm Hg; pH 7.35. Chest x-ray and EKG were unremarkable. A Gram stain of fluid aspirated from a bulla on the patient's left arm revealed gram-negative bacilli. Tobramycin, ticarcillin, cefotaxime and methylprednisolone were begun. He became hemodynamically unstable and when blood cultures were reported to be growing a gram-negative bacillus, he was transferred to the Medical College of Virginia for further management.

His past medical history was significant for the presence of long-standing rheumatoid arthritis, most recently treated with prednisone 12.5 mg per day and piroxicam, and previously with azathioprine and gold salts.

On arrival, he was afebrile, had a blood pressure of 88/56 on dopamine, pulse of 104 per minute, and respiratory rate of 30 per minute. He had a pulmonary capillary wedge pressure of 20 mm Hg. His left

Address correspondence to Dr. Markowitz at the Infectious Disease Section (111C), McGuire Veterans Administration Medical Center, 1201 Broad Rock Boulevard, Richmond VA 23249.

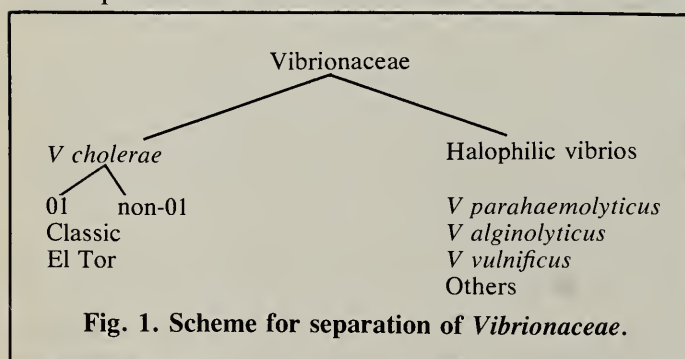
Presented 11-29-83.

arm was noted to contain many large bullae on ecchymotic, discolored skin. His examination was otherwise unchanged from that previously described. Laboratory studies were essentially unchanged except for white blood cell count of 22,600 and BUN of 52 mg per dl. Cultures of blood, stool and bullous fluid obtained prior to transfer were reported to be growing *Vibrio vulnificus*. Antibiotics were changed to chloramphenicol, piperacillin and gentamicin. Vasopressor agents were required to maintain his blood pressure. On the second hospital day, he suffered several cardiac arrests and was successfully resuscitated. On the third hospital day, he suffered another arrest from which he could not be resuscitated.

## DISCUSSION

DR. SHELDON M. MARKOWITZ: If the frequency with which patients are presented at MCV has any correlation with the importance of an illness, then we are in the midst of an epidemic of infections due to *V vulnificus*. This patient was admitted to our institution on August 11, 1983, and subsequently presented and discussed at five different conferences or seminars. Today, I'll attempt to give you a broad overview of infections due to *Vibrio* species, with special emphasis on those caused by the so-called halophilic vibrios, such as *V vulnificus*. I should like to point out some of the unique features of infections due to *V vulnificus*, particularly as pertains to the present patient.

As a group, vibrios are gram-negative bacilli which are facultative anaerobes, and, with one exception, oxidase-positive. Vibrios ferment glucose without the production of gas. In recent years, we've been introduced to an ever-expanding number of "new" *Vibrio* sp, somewhat akin to the proliferation of new legionella-like organisms that continue to occupy the time and effort of taxonomists the world over. In fact, vibrios may be classified, in a rather simple manner, into two main groups of the family *Vibrionaceae* (Fig. 1). *V cholerae* represents one arm of this scheme and is itself



**Table 1. Differential characteristics of vibrios and *Enterobacteriaceae*.**

	<i>Vibrios</i>	<i>Enterobacteriaceae</i>
Oxidase	+	-
Glucose, gas	-	+
Polar flagella	+	-
0/129 inhibition	+	-
Growth at high pH (>8)	+	-
Shape	Curved rod	Straight rod

divided into two groups, based on whether the organism is agglutinated by polyvalent anti-serum to the O-polysaccharide group 1 antigen. That which is agglutinated is *V cholerae* O-group 1, the causative agent of cholera, while that which is not agglutinated is called non-O group 1 (non-01) *V cholerae*. Non-01 *V cholerae* has been variously called non-agglutinable vibrios, non-cholera vibrios and the like, but now are most appropriately referred to as non-01 *V cholerae*. 01 *V cholerae* may be further divided into classic and El Tor biotypes, the latter presently causing epidemic diarrhea in the Indian subcontinent and the Middle East. In contrast to the classic variety of *V cholerae*, the El Tor biotype is usually strongly hemolytic on blood agar, will agglutinate a variety of species of red blood cells, and is resistant to polymixin B.

The halophilic vibrios are so named because of their requirements for more than trace amounts of sodium chloride (NaCl) for growth. This characteristic and the failure to agglutinate with polyvalent *V cholerae* O-group 1 antiserum serve to separate halophilic vibrios from *V cholerae*. *V vulnificus* is one of at least seven separate species of halophilic vibrios and, together with *V alginolyticus* and *V parahaemolyticus*, caused most of the clinically important infections due to these organisms (Figure 1). These three halophilic vibrios have all, at one time or another, been isolated from infected patients living and working in Virginia.

Once isolated, the separation of vibrios from other members of bowel flora is not particularly difficult. In general, vibrios can be easily separated from enteric bacilli, or *Enterobacteriaceae* (Table 1). Vibrios are oxidase-positive and will ferment glucose without the production of gas, unlike *Enterobacteriaceae*. Vibrios have polar flagellae, while enteric bacilli have peritrichous (or circumferential) flagellae. Vibrios are inhibited by the vibriostatic pteridine compound 0/129, while enterics are not, and can tolerate an elevated pH, while most enteric bacilli don't. Typically, vibrios are curved rods, while enteric bacilli are straight rods. This last

characteristic provided an early clue to identification when the laboratory reported the isolation of a curved rod on blood culture from the present patient.

A variety of media are available for the transport and isolation of vibrios. Thiosulfate-citrate-bile salts-sucrose (TCBS) agar and tellurite-taurocholate-gelatin (TTG) agar, two selective media containing surface active agents and increased salt concentrations, have proven useful for the direct isolation of vibrios, particularly *V cholerae* from stool and vomitus. Many vibrios grow poorly on most media designed to isolate common enteric organisms, except for MacConkey agar. Many field workers have found that alkaline-peptone broth or tellurite-taurocholate-peptone broth provide suitable "enrichment" transport media to allow vibrios to survive until the specimen reaches the laboratory for further processing. Vibrios, including *V cholerae*, have typical morphological characteristics on the above media and typical reactions on differential agar slants to allow their presumptive identification and selection.

From an epidemiologic standpoint, it is very important that we separate *V cholerae* from other vibrios. *V cholerae* is, with one exception, the only vibrio which can grow in the absence of NaCl, although it will tolerate increased concentrations. Besides their ability to grow without NaCl, *V cholerae* will agglutinate with *V cholerae* 01 antiserum. Non-01 *V cholerae*, of course, will not agglutinate with 01 antiserum.

Once *V cholerae* has been removed as a diagnostic consideration, it becomes necessary to differentiate among the remaining vibrio species for two reasons: 1) Halophilic vibrios have different antibiotic susceptibilities. 2) Some are, like common enteric bacilli, lactose-fermenters and hence may inadvertently be ignored by the microbiology laboratory unless precautions are taken and proper steps for identification instituted. The separation of the important halophilic vibrios seen in Virginia can be accomplished utilizing the information in Table 2. Salt tolerance varies among these organisms. *V*

Table 2. Biochemical differentiation of halophilic vibrios isolated in Virginia.

	<i>V</i> <i>vulnificus</i>	<i>V para</i> - <i>haemolyticus</i>	<i>V</i> <i>alginolyticus</i>
NaCl tolerance (%)	<8	≥8, <10	≥10
Lactose, acid(+)*	+	—	—
Sucrose, acid(+)*	—	—	+
Arabinose, acid(—)*	—	+	—
V-P test (±)*	—	—	+
β-galactosidase (+)*	+	—	—

\* Reaction of *V cholerae*

Table 3. Spectrum of clinical illness caused by *Vibrio* species.

	GI	Soft tissue	Blood	Other
<i>V cholerae</i> 01	+			
<i>V cholerae</i> non-01	+	+	+	+
<i>V vulnificus</i>	+	+	+	+
<i>V parahaemolyticus</i>	+	+	+	+
<i>V alginolyticus</i>		+	+	+

*vulnificus* tolerates no concentration over 8%, while *V parahaemolyticus* has very narrow salt tolerance. Reactions of *V cholerae* are given in parentheses for comparison. It should be noted that *V vulnificus* is a lactose-positive organism which would be missed as a part of the "normal" colonic flora.

The spectrum of infection caused by vibrios is surprisingly broad (Table 3). However, as far as I know, *V cholerae*, both classic and El Tor biotypes, causes only gastrointestinal symptoms. *V cholerae* non-01 can mimic the profuse, life-threatening diarrheal syndrome associated with *V cholerae* 01, but it also can produce other infections, including soft-tissue and, uncommonly, blood-borne infections, and such miscellaneous infections as cholecystitis, meningitis, peritonitis, and otitis media and externa.<sup>1</sup> Persons with the diarrheal syndrome due to *V cholerae* non-01 may have fecal leukocytes, bloody diarrhea and even fever. *V vulnificus*, the cause of the present patient's demise, may, less commonly, cause gastrointestinal symptoms, but even so, is rarely isolated from stool despite the use of appropriate isolation media. More common are soft-tissue and wound infections and bacteremia, both of which I will discuss in more detail shortly.<sup>2</sup> Other types of infection due to *V vulnificus* include external otitis, peritonitis and pneumonia. It is important to emphasize the propensity of *V vulnificus* to cause bacteremia, in contrast to *V cholerae* and *V parahaemolyticus*, which cause gastrointestinal symptoms predominantly. *V vulnificus* thus appears to resemble other enteric pathogens, such as salmonellae, campylobacter, and yersiniae, in its ability to penetrate gut mucosa.<sup>3</sup>

*V cholerae* 01 produces the classic, chromosomally mediated enterotoxin, which binds a monosialoganglioside receptor (G M<sub>1</sub>) on the cell surface of small bowel mucosal cells, thereby activating the adenyl cyclase system with a resultant efflux of water and chloride ion into the bowel lumen and an inhibition of sodium reabsorption. Non-01 *V cholerae* produces a cholera-like enterotoxin and therefore can, on occasion, mimic classic cholerae. Although the organism can be invasive, its ability to produce acute conjunctivitis in rodents (a positive

Sereny test) is minimal.

*V. vulnificus*, the organism under discussion, produces a variety of extracellular enzymes. It is considered invasive by virtue of its ability to produce a positive Sereny test. It possesses an antiphagocytic surface antigen and recently has been shown to be relatively resistant to the activity of normal human serum (perhaps related to resistance to complement-mediated effects), to produce edema and hemoconcentration in infected mice, and to produce a cytolytic and cytotoxic heat-labile extracellular toxin.<sup>4</sup> The organism's growth and pathogenicity appear to be associated in some way with the availability of elemental iron; that is, the ability of the organism to grow is enhanced with increasing concentrations of iron. A clinical correlate of this is the observation that the primary septicemic form of infection due to *V. vulnificus* appears to occur with increased frequency in those patients with diseases associated with iron overload, i.e., hemochromatosis.<sup>2,5,6</sup>

Table 4 lists the vibrios isolated from infected patients and reported to the State Health Department from 1974 through 1983. One notes a rather broad variety of vibrio isolates, but the vast majority (over 90%) are either *V. parahaemolyticus* or *V. vulnificus*. Interestingly, most of the organisms were isolated from extraintestinal sites; in fact, 32 of 41 isolates were obtained from non-gastrointestinal sources, predominantly blood and soft tissues. Of the 15 isolates of *V. vulnificus*, eight were isolated from wounds and six from blood.

The characteristics of infections caused by *V. vulnificus* have only recently been described. Most infections have occurred in patients whose occupations or recreational activities take place in and around coastal waters, strongly implying that the reservoir for these organisms is seawater. Because halophilic vibrios have been isolated from uncontaminated estuaries, these organisms are considered part of the normal marine flora. Recently *V. vulnificus* has been isolated from two inland sites, a creek in New Mexico and a reservoir in Oklahoma, extending the potential sources of this organism and perhaps other halophiles to remote, brackish waters

far removed from coastal areas.<sup>7</sup> Most infections (over 90%) due to *V. vulnificus* have occurred in males over age 40 years, most of whom have given a history of having had contact with seawater or having dealt with or ingested various shellfish.<sup>2,5,6</sup> Because water-borne activities are most likely to occur in warmer months, most infections have been reported between May and October. There also seems to be an increase in the number of organisms found in estuarine waters during warm months. *V. vulnificus* is thought perhaps to over-winter in the sediment found in these waters.

At least two and maybe three major forms of infection due to *V. vulnificus* are known. This separation is based on what appears to be a rather uniform set of definitions employed in most major reviews of the subject. The *primary septicemic* form has been defined as the presence of acute symptoms of systemic infection without an apparent primary focus of infection and the presence of positive blood cultures, while a *wound infection* has been defined as an overt primary focus of infection in a pre-existing wound or ulcer and a positive wound or blood culture, or a history of recent soft tissue injury. *Gastroenteritis*, which is uncommon, has been defined as the presence of compatible symptoms of intestinal infection in the absence of wound infection or symptoms of systemic infection, and positive stool cultures. In my review of the medical literature on the subject, I found 87 patients with *V. vulnificus* infections described. Fifty-one percent were of the primary septicemic form, while 40% were soft tissue infections. Bacteremia was present in approximately one-third of soft tissue infections. Only a small number of patients with gastroenteritis were found.

Clinically, the primary septicemic form of infection due to *V. vulnificus* is manifested by malaise, chills, fever, prostration, vomiting, diarrhea, labile blood pressure and skin rashes, including ecchymoses, cellulitis, vesicles, bullae and necrotic ulcers.<sup>2</sup> Bullae on a hemorrhagic base are said to be most characteristic. Wound infections usually occur at the site of pre-existing injury, are acute in onset, and manifested by erythema, vesicle and bulla formation, and tissue necrosis.<sup>2,5,6</sup> Let me emphasize that the hallmark of wound infections due to *V. vulnificus* and the metastatic cutaneous lesions of the primary septicemic form as well, is tissue necrosis, inviting comparison with other organisms capable of producing culture-positive, necrotizing, cutaneous lesions, such as *Pseudomonas aeruginosa*. A necrotizing vasculitis appears to be a characteristic histopathologic finding.<sup>2</sup>

Table 4. Reported *Vibrio* infections in Virginia 1974 to 1983

Species	Number (%)
<i>V. parahaemolyticus</i>	22 (54)
<i>V. vulnificus</i>	15 (37)
<i>V. cholerae</i> none-01	2 (5)
<i>V. alginolyticus</i>	1 (2)
<i>V. mimicus</i>	1 (2)
Total	41 (100)

The overall mortality rate from infections due to *V vulnificus* is 35%, somewhat higher than general mortality rates reported for gram-negative bacteremia.<sup>2,5,6</sup> The mortality rate for those with the primary septicemic form of the illness is 55%, versus 11% for those with wound infections. In the latter group, all the mortality has occurred in those patients with bacteremia.

What factors predispose patients to infection with *V vulnificus*, and what factors account for the difference in clinical manifestations? Patients with primary septicemia tend to have underlying chronic diseases, particularly chronic hepatic disease such as nutritional and post-necrotic cirrhosis and hemochromatosis.<sup>2,5,6</sup> Chronic alcohol ingestion with or without cirrhosis appears also to be a risk factor. Many of these conditions are associated with increased body stores of iron, perhaps an element essential to the virulence of *V vulnificus*. In one study the history of ingestion of raw oysters or clams was a significant risk factor for the development of primary septicemia due to *V vulnificus*.<sup>2</sup>

Risk factors for wound infection due to *V vulnificus* include a pre-existing wound and exposure to shellfish or seawater.<sup>2,6</sup> There also may be an increased incidence of diabetes and corticosteroid use in this group of patients. Risk factors for gastroenteritis are not well-defined, but may include similar factors, such as chronic alcohol ingestion and ingestion of raw shellfish, and perhaps the use of antacids or cimetidine.

Halophilic vibrios should be suspected in any acute infection associated with seafood ingestion or in wounds incurred in a marine environment, particularly if tissue necrosis is present. Middle-aged males with chronic liver disease appear to be particularly susceptible. *V vulnificus* may be added to that list of organisms of presumed enteric origin which can cause spontaneous bacteremia in patients with cirrhosis. The diagnosis is established by isolation of the organism in culture. Routine culture media will suffice for the isolation of halophilic vibrios from extraintestinal sites, while TCBS agar is preferred for isolation from stool specimens. Most halophilic vibrios appear to be susceptible to tetracycline, chloramphenicol and gentamicin, but, with the exception of *V vulnificus*, are resistant to the  $\beta$ -lactam antibiotics, including penicillin G, ampicillin and cephalothin. Tetracycline appears to be the drug of first choice for infections due to *V vulnificus*, while chloramphenicol and penicillin G are alternative therapies. One cannot over-emphasize the need for surgical drainage and/or debridement in the presence of tissue necrosis. Such le-

sions are not likely to heal with antibiotic therapy alone.

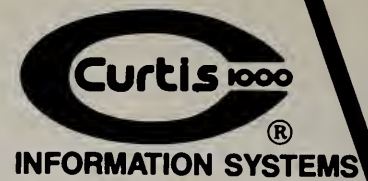
Prevention of infection due to *V vulnificus*, particularly the primary septicemic form, would not be difficult if only properly cooked seafood was ingested. Such is not the case, however, for people will continue to eat raw seafood out of taste and habit. It may be difficult to prevent such infections due to human pathogens that are part of the normal marine flora. I would recommend that, at the very least, raw seafoods, such as oysters and clams, be avoided, most especially by those with chronic liver or other disease, particularly during warm months when the number of vibrios may be increased in estuaries. The prevention of wound infections may be even more difficult, since such injuries tend to occur during warm months as part of occupational or recreational activities.

Infections due to halophilic vibrios are probably more common than we realize. Increased awareness of health care professionals about the existence of these organisms should lead us to more rapid and accurate diagnosis and a better understanding of the pathogenesis and mechanisms for control of infections due to halophilic vibrios.

The author thanks Dr. Cary N. Fishburne and Dr. Robert E. Hoyt for referring the patient; to Dr. Carl W. Armstrong, for furnishing information important to this presentation; and to Edna Womack, for typing the manuscript.

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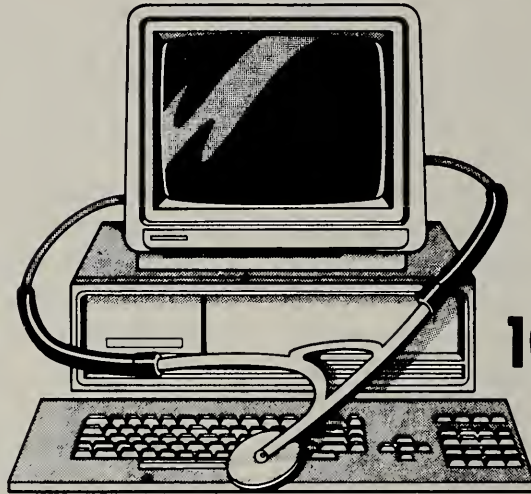
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# Mediastinal Germinoma: Two Cases

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**P**RIMARY germinomas of the mediastinum are rare. A recent review by Silverman<sup>1</sup> indicates their incidence is less than 1% of all mediastinal tumors. Recently in the Division of Radiation Therapy and Oncology at the Medical College of Virginia two cases of primary mediastinal germinomas were managed. These cases will be reported, and a brief review of the literature will be presented.

The term mediastinal germinoma refers to a primary tumor in the mediastinum of endodermal origin. Histologically, it is identical to testicular seminoma and dysgerminoma of the ovary. Since this report deals with both a male and a female patient, the term germinoma will be used.

## Case Report 1.

The patient, a 29-year-old white male, was first seen by his physician in October, 1980. The chief complaint at that time was that of left anterior chest pain and pain in the region of the left neck. PA and lateral chest X-ray were obtained and revealed a large anterior mediastinal mass on the left. The patient then underwent bronchoscopy and mediastinoscopy, which revealed a large purple-white mass in the anterior mediastinum that was encompassing the carina and incasing the internal mammary artery. Due to the involvement of the carina, the patient was felt to be technically unresectable. Biopsy of the mass returned mediastinal germinoma. The patient underwent metastatic workup, which consisted of a normal CT scan of the abdomen, normal liver spleen scan, and a normal bone scan. Testicular exam was felt to be within normal

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limits. Laboratory findings were within normal limits except for an elevated urine-HCG. The patient was then referred to the Radiation Therapy Division at the Medical College of Virginia and a course of external beam radiotherapy was initiated on November 5, 1980. On December 24, 1980, the patient completed 4950 (cGy) in 33 fractions to the mediastinum. Followup CT scan of the chest obtained on April 8, 1981, revealed complete regression of the tumor and urine-HCG levels returned to normal.

The patient was asymptomatic until August, 1981, when he began to complain of right hip pain. Bone scan obtained at that time revealed increased uptake in the right ileum. Bone marrow biopsy at that time was negative; however, the patient continued to complain of pain. Repeat biopsy in December 1981 was positive for germinoma. With evidence of metastatic disease, the patient was referred to the Division of Medical Oncology and received ten courses of cisplatin and vincristine during early 1982 and 1983. This gave minimal pain relief. On May 20, 1983, a bone scan was obtained and showed increased tracer activity in the right lateral aspect of S1 along with the previously described right iliac bone lesion. CT scan revealed a destructive lesion in the right sacral ala with an associated soft-tissue mass extending into the right first sacral foramen (Fig. 1). The patient was then referred back to the Radiation Therapy Division and on August 21, 1983, completed 3000 cGy delivered in ten fractions to the right sacral and iliac regions. The patient received good palliation from the radiotherapy, and post-therapy CT scan of this region revealed a decrease in the size of the soft tissue mass with evident bone repair (Fig. 2).

## Case Report 2

The patient, a 15-year-old black female, initially presented in May 1983 with the chief complaint of intermittent fevers (102°-103°) and a 30-pound weight loss over a six-month period. PA and lateral chest X-ray were obtained and a large anterior mediastinal mass was observed (Fig. 3). The patient was admitted to MCV for further evaluation, and in May 1983 mediastinoscopy was done with the findings of a large anterior mediastinal mass involving the great vessels. The patient was felt to be unresectable due to the vascular invasion and the high morbidity and mortality associated with such resections. Biopsy of this lesion returned germinoma, and the patient underwent bone marrow aspirate, serum HCG levels, and pelvic ultrasound, all of which were within normal limits. The patient was then referred to the Division of Radiation Therapy and Oncology.

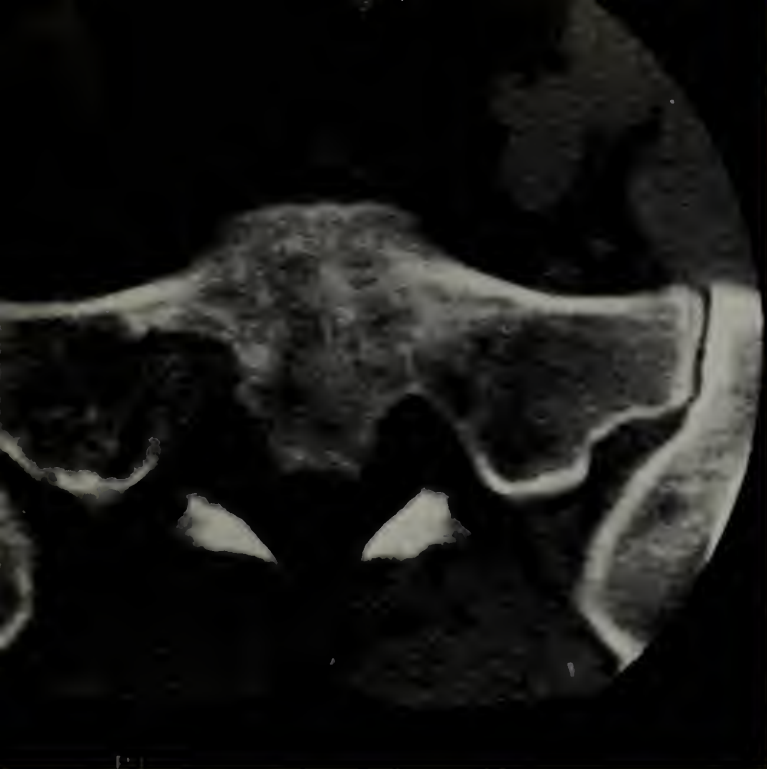


Fig. 1. CT scan shows destructive lesion in right sacral ala with associated soft-tissue mass.

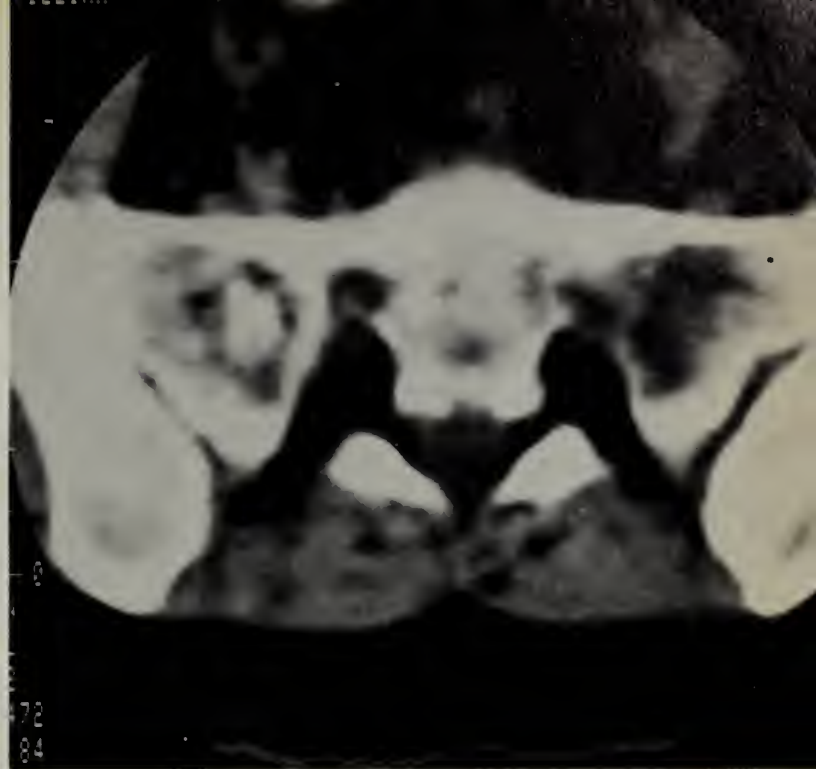


Fig. 2. After radiotherapy, scan shows bony repair in right sacral ala and decrease in soft-tissue mass.



Fig. 3. PA chest X-ray at initial diagnosis. Note large mass in anterior mediastinum.

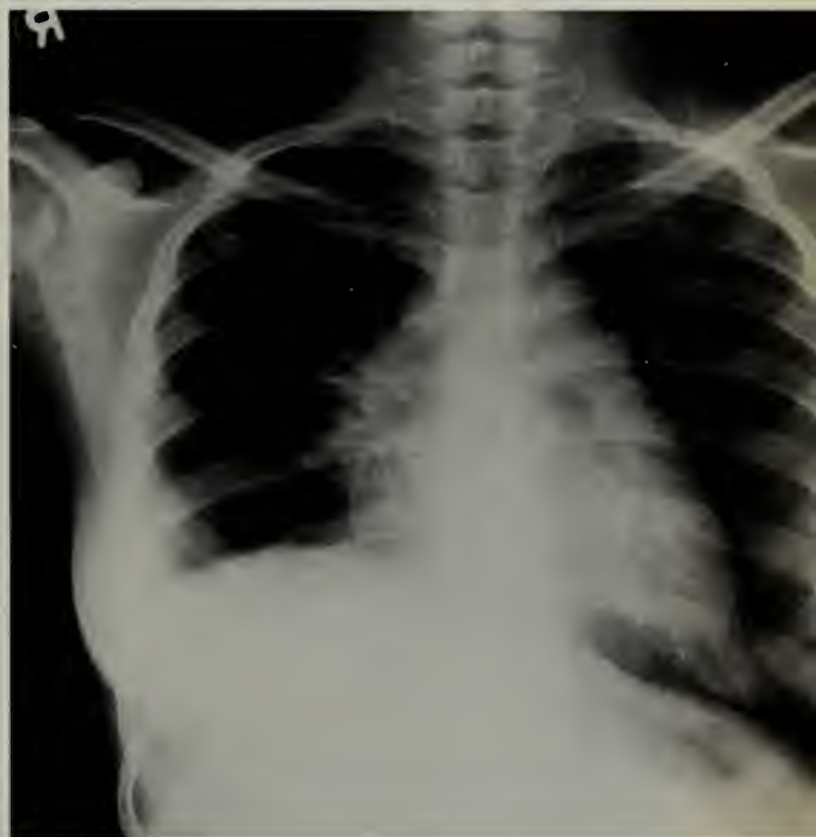


Fig. 4. Chest X-ray following radiotherapy shows marked decrease in size of mass.

Physical examination was significant for no supraclavicular, cervical, axillary, or inguinal adenopathy. There were no abnormalities noted on chest exam. Laboratory findings were within normal limits except for a hemoglobin of 10 and an LDH value of 900. Alpha-feto protein levels were within normal limits.

The patient was started on a course of external beam radiotherapy on August 16, 1983 and completed 4500 (cGy) delivered in 33 fractions over 55 treatment days through a combination of AP/PA and wedge-pair treatment portals. Chest X-ray studies obtained after treatment revealed a decrease in the size of the original lesion; however, there was

persistent disease present (Fig. 4). The patient continues to be followed by the Pediatric Oncology Division and is undergoing chemotherapy for the remaining disease.

### Discussion

A primary germinoma of the mediastinum, although rare, is recognized as a distinct clinical entity.<sup>2</sup> The current viewpoint concerning the etiology of these tumors is that of Patten,<sup>3</sup> who feels the origin is from the endoderm of the yolk sac and that cells reach the gonad through migration along the urogenital ridge. This would explain the primary appearance of these lesions in the mediastinum. Histologically, they are identical to their gonadal counterparts.<sup>4</sup>

The experience of our patients emphasizes several clinical points concerning mediastinal germinomas. They are tumors of youth, with the average age in the range of 20-30 years.<sup>5,6</sup> It is quite unusual to observe a lesion in a female patient (Case 2), as the incidence in females is 4.8%.<sup>6</sup> The normal clinical presentation is that of chest pain, coughing and dyspnea, as partially observed in Case 1. Such vague findings as fever and weight loss (Case 2) may be the only presenting symptoms.

The therapy for primary germinomas of the mediastinum consists of surgical excision or biopsy and radiation therapy. Unfortunately, total surgical excision is often impossible secondary to encroachment of the great vessels, with resection rates reported of approximately 25%.<sup>5</sup> Radiation therapy is effective in controlling local disease with reported control rates of 90%-100%.<sup>4,5</sup> Most series agree with Bagshaw,<sup>7</sup> who feels that doses in the range of 4000-4500 cGy in four weeks are necessary for local control.

Although local control is often obtained, mediastinal germinomas have a high incidence of developing disseminated disease, and overall fare worse clinically than their testicular or ovarian counterparts. Bone metastases frequently present late in the course of a germinoma, with a reported incidence of 40%-60%.<sup>4,8</sup> Hurt<sup>5</sup> has identified five poor prognostic factors: age greater than 35 years, superior vena cava syndrome at presentation, supraclavicular or cervical adenopathy, hilar disease on

radiographic studies, and fever at the time of diagnosis. The five-year survival ranges from 50%-75% with the report of Sterchi<sup>9</sup> (58%) probably reflecting the most accurate survival data. There are reports of long-term survivors with isolated metastatic disease.<sup>4</sup> Hopefully, this will be the case with our first patient. The primary role of chemotherapy as adjuvant therapy is unknown at this time due to the rare incidence of these lesions; however, when metastatic lesions are present, most authors are recommending regimens that include vinblastine, cis-platinum, and bleomycin.

### Conclusion

The presented cases show a response to radiotherapy and this should continue to be part of the primary therapy. More research concerning these tumors is needed to improve their overall prognosis. Through aggressive, multimodality therapy we may begin to observe survival similar to the rate observed in gonadal counterparts.

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# Appendico-Uterine Fistula: Case Report

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**A**PPENDICO-UTERINE fistula is an extremely rare complication of acute perforated appendicitis. The fistula forms between the appendix and the right fallopian tube, with ultimate communication to the uterus and vagina. We have recently had such a case.

## Case Report

A previously healthy 8-year-old female patient was admitted to the pediatric service with fever, abdominal pain and leukocytosis. The initial diagnosis was possible pyelonephritis, and the patient

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Fig. 1. Fistulogram shows contrast in cecum and right fallopian tube.

was treated with intravenous antibiotics. Over the next few days the patient's abdominal pain gradually worsened and was associated with a fever spiking as high as 103°F. After five days of hospitalization the patient was referred to the surgical service. A diagnosis of acute perforated appendicitis with possible appendiceal abscess was made, and an exploratory laparotomy was promptly performed. Acute appendicitis with abscess formation was found. The appendix was removed and the abscess drained. The postoperative course was uncomplicated, and the patient was discharged from the hospital on the tenth postoperative day. She was followed in the office. There were no wound complications.

Eleven weeks after the operation an abscess developed at the operative site. The abscess was drained and local wound care continued with betadine soaks. The wound ultimately healed over the next four months.

Eleven months following the original operation, a small mucous fistula developed at the wound site. The patient's mother reported intermittent inflammation around the vulva and the vaginal opening. A fistulogram was done on an outpatient basis and revealed a communication with the cecum and the proximal ascending colon. The contrast material also filled the right fallopian tube and then entered the uterus and vagina (Figs. 1 and 2). The fimbriated end of the right fallopian tube showed a fistulous



Fig. 2. Fistulogram shows contrast filling uterus (pulled to right of mid-line) and emptying into vagina.

communication with the anterior surface of the cecum near the appendiceal stump.

A barium enema indicated irritability of the cecum, but the fistulous tract could not be demonstrated. The patient was admitted to the hospital and, after adequate bowel preparation, an exploratory laparotomy was done. There was a severe inflammatory reaction in the right lower quadrant of the abdomen. Right hemicolectomy and a right salpingectomy were performed. Her postoperative course was uneventful and she was discharged from the hospital on the ninth postoperative day.

### Discussion

Appendiceal perforation with abscess formation occurs in 2%-3% of patients with acute appendicitis. All fistulae of appendiceal origin are rare. They may involve the urinary bladder, large and small intestines, or the uterus. Spontaneous cutaneous communication are also infrequent.<sup>1-5</sup>

We have presented a case of appendico-uterine fistula in a young female patient with perforated appendicitis. The diagnosis was suggested when the

patient began to have recurrent inflammation of the vulva and the vagina due to passage of colonic contents from the cecum to these organs. This classic symptom has been previously described.

We believe that abdominal x-rays, barium enema and fistulography should usually be performed on patients who develop a persistent external fistula following appendectomy. After bowel perforation an appropriate resection should be done to prevent continued inflammation of the genital tract.

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# Volunteers and Cancer Control in Virginia

J. Shelton Horsley III, MD, interviews  
Bernard W. Woodahl in *Richmond, Virginia*,  
about the evolution  
of voluntary cancer control programs.

*Bernard Woodahl retired in 1980 after 26 years as the executive vice president of the American Cancer Society, Virginia Division. He is the author of Cancer Control Through the Years, 1913-1980, a narrative outline of voluntary cancer control programs in the nation and in Virginia published by the Virginia Division in 1981.*

**DR. HORSLEY: When and how did voluntary cancer control activities get started?**

**MR. WOODAHL:** Voluntary cancer control activities began taking shape at about the turn of the present century, when the incidence of cancer and several other health problems, particularly tuberculosis, was on the increase and was causing a great deal of concern to physicians and the lay public. This led to the organization of the National Tuberculosis Association in 1904. At that time the death rate from TB was in excess of 200 per 100,000. The death rate from cancer was considerably less—63 per 100,000, but cancer was recognized as a devastating disease and several medical organizations

The Cancer Trends series appears under the editorship of Dr. Horsley, Dr. Gerald Goldstein and Dr. Anas M. El-Mahdi. It is sponsored by the Professional Education Committee, Virginia Division, American Cancer Society. Address correspondence to Dr. Horsley at Box 11, MCV Station, Richmond VA 23298.

had gone on record as favoring a national cancer organization. Following a number of preliminary meetings, ten doctors and five lay people met in New York City on May 22, 1913, and organized the American Society for the Control of Cancer. The resolution to organize stated that its purpose was "to disseminate knowledge concerning the symptoms, treatment and prevention of cancer; to investigate conditions under which cancer is found; and to compile statistics in regard thereto."

**DR. H.: In your historical narrative you speak of lay and medical involvement. What form did this take? How did the two work together in the early days?**

**MR. W.:** Soon after the new organization was formed it began to sponsor activities, many involving both lay and medical volunteers. One early example was a lay education project referred to as "Parlor Discussions on Cancer," which with the assistance of physicians was organized by some General Federation of Women's Clubs in the New York City area.

Physicians also helped the Society produce its first piece of literature for the public; it was titled "Facts About Cancer" and was distributed through the mail to 14,000 persons. And lay and medical members of the Society assisted the Metropolitan Life Insurance Company in producing a pamphlet on cancer for its policy-holders.

Physician volunteers and lay members also were involved in overall program planning and in helping the new organization relate to medical groups. Out of these joint efforts came the Society's first professional publication about cancer, "What We Know About Cancer: A Handbook for the Medical Profession."

I don't mean to imply that conflicts and dissatisfactions did not develop between lay and medical members of the Society. They certainly did, but the Society was originally conceived as a joint effort and this partnership has prevailed through the years.

**DR. H.: Describe the beginnings of the cancer program in Virginia. I know my grandfather, Dr. J. Shelton Horsley, was active in the organization's education programs in the Richmond area during the 1920s.**

**MR. W.:** Yes, your grandfather was a pioneer in the cancer program in Virginia. He worked with The Medical Society of Virginia for many years in developing professional education programs about cancer, and in 1927 he became chairman of the Virginia Section of the American Society for the Control of Cancer.

The earliest organized voluntary effort in Virginia grew from the Petersburg Tumor Clinic, which was organized by Dr. Wright Clarkson in 1924. Dr. Clarkson, a radiologist, formed the clinic as a means of providing treatment for indigent patients. Volunteers, medical and lay, associated themselves with Dr. Clarkson, and a more formal group, which was called the Virginia Cancer Foundation, was organized in 1934. It was also an outgrowth of the Petersburg Tumor Clinic.

In 1937 the national Society, which was developing in Virginia under Dr. Horsley's leadership, joined with Dr. Clarkson's organization to form a statewide organization. The combined group adopted the name Virginia Cancer Foundation and was granted a charter. Richmond was designated its headquarters.

**DR. H.: What was the role of the women's club groups, especially in relation to the Women's Field Army?**

**MR. W.:** From the time the American Society for the Control of Cancer was formed, women's clubs took an active interest in its program and often assisted with special projects. In 1933 the General Federation of Women's Clubs in cooperation with

the Society began developing the organization which became the Women's Field Army and which by the end of 1936 had been established in 38 states. In addition to conducting public education programs, the Army helped raise funds. In Virginia in 1937, the Field Army held its first fund-raising campaign under the sponsorship of the Virginia Federation of Women's Clubs. It was an enlistment drive in which dollar memberships were sought, and a total of \$3,514.87 was raised.

The Field Army brought revolutionary changes. Thousands of women across the country became involved in this militant effort against cancer, using as their battle cry, "Early cancer is curable—fight cancer with knowledge." By the end of 1939, when the Virginia Federation discontinued its sponsorship, the Field Army in Virginia had conducted three successful annual education and fund-raising campaigns.

**DR. H.: How did the national organization bring about its present pattern of organization? And how was the Virginia organization modified to fit this pattern?**

**MR. W.:** In 1944, after much conflict between lay and medical members as to their respective roles in the national Society, a plan was approved for reorganization. It provided for equal representation of professional and lay members on the board of directors. The name was changed to American Cancer Society, Inc. Plans were approved for more expansive education and service programs, and the Society mounted its first large-scale, nationwide campaign for funds. Receipts totaled \$4,292,291 (in comparison with \$832,862 in 1944), and 25% of the funds were designated for a national cancer research program in cooperation with the National Research Council.

At the Virginia Cancer Foundation board meeting in 1947 the trustees adopted new bylaws to conform with the national Society and the name was changed to Virginia Division, American Cancer Society, Inc. This laid the groundwork for a period of rapid growth and expansion. By 1948 campaign receipts had increased to \$220,535.

**DR. H.: What were your principal objectives in the mid-1950s when you became executive director of the Virginia Division?**

**MR. W.:** Our first concern was to make a comprehensive survey of the organization and its program in Virginia. Out of this a number of changes were

developed, including a more representative board of directors, wider participation of the medical and scientific professions, better organized local units to help throughout the state, and a stronger fund-raising organization.

**DR. H.: I know that a major project was the Cancer Prevention Study. What was its purpose and what did it achieve?**

MR. W.: Originally the Cancer Prevention Study was designed as a six-year epidemiological study to obtain information about factors associated with cancer, such as environmental exposures, habits, diet, previous illnesses and heredity. It got under way in 1959 when about 68,000 ACS volunteers in 25 states, including Virginia, were recruited and trained as data-collectors. About 2,600 volunteers participated in Virginia, and more than 41,000 men and women were enrolled. Robert J. Faulconer, MD, Norfolk, served as Chairman for the Cancer Prevention Study in Virginia.

The original project was completed in 1965, but selected segments of the Study have been reactivated. In October 1971, over 2,500 Virginia volunteers began tracing 35,519 individuals from the original study and were able to account for 95.8% of them. They determined the number of enrollees who had died in the intervening years and the causes of death; also, information about cigarette smoking and other risk factors was obtained.

In 1982, for another Cancer Prevention Study involving an examination of old and new factors in the lifestyles and habits of 1 million Americans, 33,000 Virginians were enrolled by some 2,200 ACS volunteer researchers who are following their subjects for six years. Thus the Cancer Prevention Study continues to yield important medical information.

**DR. H.: By the end of the 1950s the Virginia Division and the American Cancer Society as a whole had become well established and were involved in all phases of cancer control. What were some of the program highlights of the '60s and '70s?**

MR. W.: The emphasis was on developing and increasing program services—public and professional education programs, service and rehabilitation programs such as the Lost Clubs for laryngectomy patients and clubs for ostomy patients.

One of the notable achievements was the introduction of the Reach to Recovery program in 1967 through the Richmond area unit.<sup>1</sup> On the recom-

mendation of the Virginia Division the program was adopted by the national Society and became available to women throughout the United States and in many foreign countries.

Conquer Uterine Cancer projects were carried out in cooperation with the Pythian Sisters, Pilot Club, Women's Auxiliary of the United Commercial Travelers and Virginia Federation of Women's Clubs. The Virginia State AFL-CIO's endorsement of a cooperative cancer education program opened the way for the Division to expand its activities to these groups.

In 1966 the University of Virginia School of Medicine used a \$1,500 undergraduate teaching grant from the Division to support a cancer teaching day with guest participants, and such days became annual events at both the University of Virginia and the Medical College of Virginia. A grant for a series of guest lectures on oral cancer was made to the MCV School of Dentistry. Since 1976 teaching grants have also been made to the Eastern Virginia Medical School. The Division has also made summer fellowship grants to the schools since 1969.

In 1968 the Virginia Division for the first time exceeded \$1 million in its annual Crusade. Through the Society's nationally administered research program a substantial part of research funds raised by the Virginia Division each year are allocated to Virginia's medical schools.

**DR. H.: From personal experience I know how rapidly the Society grew in the '60s. What are a few of the important happenings of the 1970-1980 period?**

MR. W.: In 1970 the Virginia Division completed a reorganization plan that brought better and more uniform services for all parts of the state and improved staff services.

A number of mouth cancer detection clinics were held during this period in different parts of the state, especially in rural areas; in one week in 1970 over 900 Southwest Virginians visited the clinics. Major funding was provided by the US Department of Health, Education and Welfare through a cooperative arrangement with Virginia's Department of Health, the School of Dentistry at the Medical College of Virginia, and the American Cancer Society.

In 1970 the Virginia Tumor Registry was established with financial and technical support from the Virginia Regional Medical Program. The program had the endorsement of many physicians and hospitals, the Medical Society of Virginia, State Department of Health, Virginia Hospital Association, and

the Cancer Society. This important project, as you know, has continued. The first comprehensive report from the Registry, in 1976, published data gathered from 12 hospitals for a three-year period and representing 13,825 cases and 56 sites.

An idea from the Division's Professional Education Committee came to fruition in 1972 with the establishment of a Professors of Clinical Oncology Program in cooperation with the Medical College of Virginia and the University of Virginia School of Medicine. The objective was to help each medical school support an additional senior faculty member to improve cancer teaching and thus bring about more effective management of cancer patients. The success of the program in Virginia has led to its adoption by other divisions.

The Virginia Division's 1973 annual report indicated that out of an estimated 19,929 cancer patients in the state at that time, the ACS was giving some kind of assistance to more than 6,000, including loan and gift items, transportation to treatment sources, information and referrals, and rehabilitation services.

Division service program records show that 161 Reach to Recovery volunteers assisted 966 mastectomy patients; a new Lost Chord Club in the Bristol area brought to seven the number of laryngectomy groups in Virginia; 57 volunteers helped 160 laryngectomy patients learn to speak again; 56 ostomy rehabilitation volunteers assisted 165 ostomy patients; 3,900 persons visited five mouth cancer detection clinics around the states; and 339 men were seen at lung cancer detection clinics in Winchester as a pilot project relating to heavy smoking in men over 40.

September was designated as Pap Test Month and extensive coverage was given the program by the news media. A cancer screening center was set up at the 1975 Virginia State Fair in Richmond; over 200 volunteers, including physicians and nurses, were recruited to staff the mobile trailer. Free Pap tests, breast exams and breast self-examination instruction were provided.

In September 1977 the Virginia Division Crusade for funds exceeded the \$2 million mark for the first time under the chairmanship of Mrs. M. Pinson Neal, Jr., Richmond.

DR. H.: Thank you, Mr. Woodahl.

1. Wilhelm MC: Helping women cope with breast cancer treatment. Va Med 1982;109:773



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# VIRGINIA MEDICAL

## EDITORIAL

### The President's Year: Changes and Challenges

**D**o all fairy tales begin with "Once upon a time . . .?" No, some begin with "If I'm elected . . ." Fortunately, I never had to make any promises as to what I would or wouldn't do. I had no platform, not even a plank, and I'm not too sure I knew what I would do or what was expected of me. I only knew that I would work hard and try to carry out the wishes of Council and the House of Delegates of The Medical Society of Virginia to the best of my ability.

In an attempt to accomplish this, I have been to Richmond approximately 40 times since last November, testifying before legislative committees and meeting with groups, both in and outside of The Medical Society of Virginia, including three Board of Medical meetings. I have spoken before 14 local medical groups around the state and have been to Los Angeles and Chicago to AMA meetings, to Baltimore, Maryland; Pinehurst, North Carolina; Lexington, Kentucky; and the Greenbriar in West Virginia for adjacent state meetings. Jean and I hosted a party for the Society's leadership and attended a meeting on Capitol Hill with them and our congressional delegation. I am not reiterating this to impress you with what I've done, as most of the above are routine for any Medical Society of Virginia president but rather to give you a better

feel for what the President's job entails. In addition, I had to call on Dr. Kuykendall to fill in for me on several occasions, which he did most ably. I have no concern about turning the reins of office over to him, as the Society will be kept on the right course by a steady hand. There is always something that stands out in a president's year. In Harold Williams', it was the Summit Meeting contribution, which went off without a hitch under his direction and guidance. Chris Alexander was noted for his impetus in increasing MSV and AMA membership. And so it goes.

Perhaps my presidency will be noted most for increased participation by the membership in committees, as well as improved communications between the committees and the MSV leadership, and more committee meetings. Other things might be increased exposure to our legislators or possibly the on-going negotiations with Blue Cross/Blue Shield over its tax-free status, my monthly comments in Virginia Medical to bring you my thoughts and concerns, closed-shop HMOs, or perhaps the breast cancer legislation, something else, or perhaps nothing. Who knows? Time will tell.

Last year one of my goals was to increase participation by the members of the Society in our organization. I feel a good start on this has been made, and I anticipate that it will continue, as Dr. Kuykendall feels the same. The other major goal was communication, and I feel that my comments in Virginia Medical and the speaking engagements

Presented before the House of Delegates of The Medical Society of Virginia on November 8, 1984, at the Williamsburg Conference Center.

throughout the Commonwealth have done that. We are fortunate to have a super staff at The Medical Society of Virginia. Without them, nothing would be accomplished.

Jim Moore and I have been in contact by phone at least once a week, even when I was in Taiwan and Japan, and often three or four times a week. I hesitate to single out any individual members of the staff for kudos, as I'm afraid I will miss someone, and they are all worthy of mention. We are actually raising the roof at Medical Society of Virginia headquarters in order to accommodate more functions, the journal continues to be of high caliber, and the staff is excellent. One of the staff has been assigned to visit physicians and local medical societies in order to improve communications between all parties and increase membership. What more can I say? We are blessed in many ways. The Medical Society Auxiliary under Velma Seif has been everything a president could wish for . . . hard-working, helpful and pleasant, being there when most needed, especially in regard to their participation in the AMA's project Med-Vote. The various committees of the Society have been most active. All of them have met at least once and many have met more often. I would like to mention especially Dr. Conner and his Insurance Committee members; Dr. Ron Davis and the Ad Hoc Committee on Malpractice, Dr. Barney and the Physician's Health and Effectiveness Committee; and Dr. Morton and the MSVRO. My associates, especially those who have had to shoulder much of my work, as well as the medical and laboratory staff and the administration at Fairfax Hospital, and my secretary, have held the impact of this year and I thank them for their tolerance. They, along with the 10th district delegation, have made this year a possibility. Thank you.

Lastly, and most importantly, I want to thank my wife and children for making this dream come true, for putting up with all the meetings, trips, absences, and an even worse disposition than usual, which have gone along with everything leading up to and including this year. Thank you for your understanding and being there. Who else but a wife and family would tolerate such goings on?

In my travels around the state and elsewhere, physicians tell me how bad things are, that the government is becoming more intrusive into their practice and life. They want to know what the good news is. It's true, times are different and we are like the corner drugstore and the independent grocery. Before long, except in unusual circumstances, the solo practitioner may be a thing of the past, like the

dodo bird. To us, this is bad. To the future practitioner who has never known practice as we know it, that will be the status quo. The patient has already adjusted to group practice and loosely knit groups who cover each other on nights and weekends. As long as they receive what they perceive as good care at a reasonable price and are able to see a physician when they need to, they probably won't care.

To survive in this changing world, we need to adjust; we must adjust to survive. Business and government are refusing to pay the bills without questioning their justification. Competition is here to stay in one form or another. In the past, the style has been gentlemanly. In the future, this will be less likely. Remember that cliché: When the going gets tough, the tough get going.

**I** would now like to change course and embark on some thoughts and changes for you, the House of Delegates, to consider in your deliberations. Some of these I may have touched on during the year, but I would like to emphasize them now.

- Our membership needs to be increased, if for no other reason than to generate more income. While on this subject, I would like to remind you that our dues are the second lowest in the 50 states. Serious consideration should be given to raising these at this meeting in order to be able to accomplish all that we need to do and to keep our reserves at an adequate level. Also, our staff needs to be appropriately compensated, in line with their responsibilities.

- Dr. Kuykendall plans to form a non-profit organization in order to do certain projects he has in mind. Perhaps now is the time for the society to engage in revenue-producing activities to keep dues down and to provide more services for the members.

- I feel a statewide speakers bureau needs to be developed to carry to the lay public the following message: The Medical Society of Virginia and the physicians of this state are concerned about the health of the citizens of Virginia. We are concerned about the quality of their health care, concerned that the course of action being taken by national and state legislation may exclude some from quality medical care and access to new technological advances. This message could be developed by Mr. DeBolt's firm and the speakers professionally instructed, if necessary.

- We need to incorporate the specialty societies in the state under our umbrella in order to consolidate and coordinate activities and to engender a feeling of unity.



Dr. C. Barrie Cook receives the Presidential Medal from incoming President Harry C. Kuykendall.

- Medical students and residents should be brought into the Society's activities by being appointed to committees.

- I feel we need to establish a loan fund to be made available for medical students at Virginia's medical schools.

- The president, or his designee is, after all, the official spokesman for The Medical Society of Virginia, but one man can't do it all. We should think about an on-going program to expand our contact with the legislature.

- Our study of long-range plans and goals should be completed as soon as possible and put into effect where indicated.

- Because of the number of foreign medical graduates in the state and the number of Americans studying in foreign medical schools, an ad hoc committee to study their special needs may be necessary.

In conclusion, I would like to say that this has been a wonderful year, a busy year and one, at times, when I felt I was on the verge of losing control and going into orbit.

The challenges are great and the changes many. In spite of that, it's been the highlight of my medical career and one that I will always remember.

Although at times my goals may have seemed distant and unattainable, the following poem has served to sustain me in my quest:

In youth, because I could not be a singer  
I did not even try to write a song  
I set no little trees along the roadside  
Because I knew their growth would take so long  
But now, from wisdom that the years have brought  
I know that it may be a blessed thing  
To plant a tree for someone else to water  
Or make a song for someone else to sing.

To paraphrase Sir Winston Churchill, never has one person owed so much to so many. Thank you for making it possible.

C. BARRIE COOK, MD

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The Fairfax Hospital  
3300 Gallows Road  
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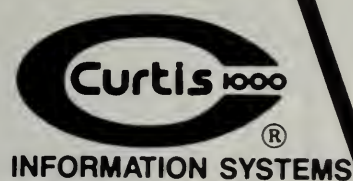
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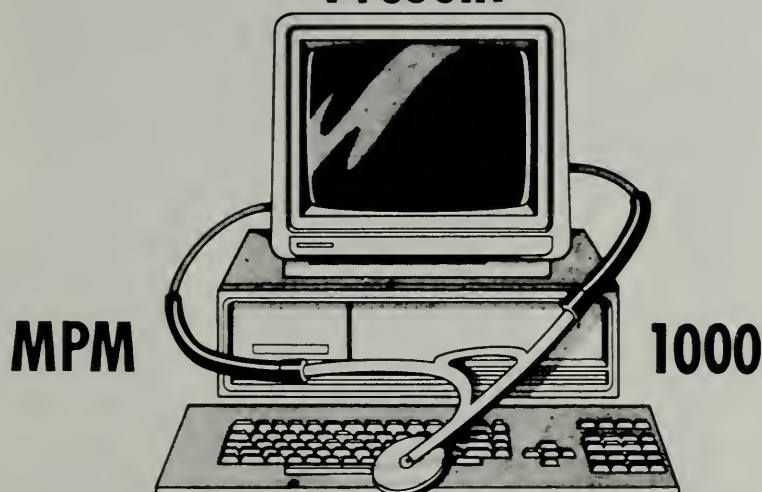
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# LETTERS

## Seeks to allay doubts about griseofulvin

Griseofulvin is a useful and important drug in any dermatology practice. Unfortunately, many internists and family practitioners have apprehension over the use of this drug.

First introduced into therapy in 1958, griseofulvin is the main internal drug used for the treatment of dermatophyte infections. Fungal diseases of the scalp, trunk, groin, feet or nails may all be treated with this antibiotic. Candidiasis and deep fungal infection are not responsive to griseofulvin.

Griseofulvin has proved to be a remarkably safe drug. Headache, gastrointestinal upset and rare drug-induced rashes including photosensitivity have been reported. Blank has observed patients who have taken griseofulvin continuously since it became available and several have ingested two grams a day for a minimum of three years.<sup>1</sup> Careful studies of liver function, kidney function and the hematopoietic system failed to reveal any deleterious effect. Griseofulvin may exacerbate acute intermittent porphyria though having no effect on porphyria cutanea tarda. Griseofulvin may inhibit the anticoagulant effect of Bishydroxycoumarin and gastrointestinal absorption is affected by phenobarbital. Griseofulvin can cause a flareup of preexisting lupus erythematosus. Early anticipated fears of blood and cellular toxicity are not seen in clinical practice.<sup>2</sup>

In my practice, griseofulvin is used primarily in two clinical settings: 1) for children with tinea capitis, and 2) for patients who desire treatment of fungal involvement of fingernails and toenails. Relapses may occur when treating nail disease, but success rates are high and patient acceptance is good. Less often, I find it necessary to treat severe inflammatory fungal infections of the groin or feet with griseofulvin in combination with topical therapy. Additionally, with the large numbers of outpatient cancer chemotherapy patients, griseofulvin is used to treat their local or widespread cutaneous fungal infections.

I do hope that my internist colleagues will not view the use of this drug with alarm, nor raise undue

anxieties in patients taking it. Unfortunately, I see this occurring frequently. Griseofulvin has been now used for nearly three decades with confidence and safety, and undoubtedly will remain an important drug in the management of cutaneous fungal diseases.

**Paul Kravitz, MD**

9004 Fern Park Drive  
Burke VA 22015

1. Blank H (commentary). Treatment of dermatomycosis with griseofulvin Arch Dermatol 1982;118:835-836
2. Blank H, Roth F. The treatment of dermatomycosis with orally administered griseofulvin. Arch Dermatol 1959;79:259-266

## Questions the tenor of many Va Med articles

Does the tenor of many of the articles in VIRGINIA MEDICAL produce in anyone a cringing or raise a question in our spirits, such as, Is this an expression of the foundation on which my colleagues stand? Upon what do we live and move and have our being? I refer, of course, to God, our Father, the principles He has ordained for us by His Son, our Lord and Saviour, Jesus Christ!

How heart-warming it would be to see God acknowledged as the Creator, the Healer, with the incarnate Son revealing God's salvation through the sacrifice on the cross, giving us deliverance and the promise of everlasting life. The Bible clearly instructs us not to set up idols or worship any man-made thing or creature setting themselves before God. That there is only one way to the Father, and that is through the Son.

Well, a lengthy paper would be easy to write on this subject. However, my point is made that we are directed to learn of the Father, to draw nigh unto Him and He will draw nigh unto us. The Word makes it very clear that we are to worship Him and none other. It is important that He receive the praise, glory and honor in *everything* one does!

**Bradford S. Bennett, MD**

4211 Talcott Drive  
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# WHO'S WHO

The tabletop computer in **Dr. Edward W. Hook's** office at the University of Virginia School of Medicine comes with the presidency of the American College of Physicians, which Dr. Hook will assume next month. The chairman of the internal medicine department types out his own messages on the portable keyboard sending ACP-related "electronic mail", telling a visitor that typing was "one of the most useful courses" he took at his Columbia, South Carolina, high school. Then he notes that high technology and information processing are changing the way medicine is practiced.

"All this technology and reliance on computers and modern methods of information processing carry the risk of dehumanizing medicine," he observes. "The challenge to medical schools is to prevent this and to preserve the qualities of compassion, respect and integrity in patient care and physician training."

Other challenges to medicine the 60-year-old physician sees today pertain to care of the elderly and the appropriate, cost-effective use of technology and special care units in the management of patients. "Clearly, technology is good, but the critical issues are whether it is effective and how and

for whom it is used," Hook says.

In recent years Hook has become involved in health policy issues. Cost containment, including reimbursement mechanisms, is the number one health policy issue, he believes. In his professional activities, like his work with the ACP, the National Academy of Sciences' Institute of Medicine, and the UVA hospital's Ethics Committee, he confronts these issues.

Such responsibilities have tended to divert Hook from his earliest medical interest—infectious diseases, especially salmonella infections. However, he easily recalls the work which led to his first scientific paper on adapting influenza virus to hamsters. And in recent years he has served as an advisory editor for a new medical dictionary, penning definitions for infectious disease terms from abscess to zoonosis.

In reviewing his career, Hook contrasts his application of 40 years ago to the Emory University School of Medicine—just a letter addressed to the dean—with today's elaborate admissions process. Similarly, an Emory professor simply wrote to a colleague at the University of Minnesota in order to obtain an internship there for Hook, a procedure markedly different from the computerized national residency matching program currently used. Hook directs the international medicine residency training program at the University of Virginia. Recently accredited for five years, the program is one of the country's most competitive. Last year, out of more than 700 applicants, 23 fourth-year students were accepted to perform their res-

idencies in Hook's department.

Born in Sumter, South Carolina, the son of public school teachers, Hook attended Wofford College in Spartanburg, South Carolina, and, when World War II erupted, took military training as a private at Fort Riley, Kansas, then completed pre-medical studies in an Army program at Yale University.

After receiving his medical degree from Emory University and completing his internship and residency, Hook spent two years in the Army as a medical officer, then practiced medicine and taught at Johns Hopkins and Cornell universities. He joined the University of Virginia faculty in 1969 as chairman of its largest department and as the Henry B. Mulholland Professor of Medicine.

Since then, Hook's experiences have been varied. He has learned about herbal medicines on an ACP trip to the People's Republic of China, helped draft national guidelines for physicians caring for terminally ill patients, serves on the United States-Japan Cooperative Medical Science Committee, and added more American prints to his personal art collection. Now, two of the many books in his office, Vladeck's *Unloving Care* and *Computer Applications to Private Office Practice*, aptly reflect his current concerns.

Hook will be sworn in as president of the 60,000-member specialty society on the 23rd of next month in Washington, DC.

These Medical Society of Virginia members are newly elected to membership in the American College of Physicians: **Dr. William G.**

*The profile of Dr. Hook was written by Helaine Patterson, director of Medical Center Information Services at the University of Virginia, and originally appeared in VIRGINIA FOOTBALL, official program of the University of Virginia. Copyright © 1984 Virginia Student Aid Foundation.*

Franklin, Arlington; Dr. Neil I. Stahl, Springfield; and Dr. Marvin Guter, Dr. Harvey V. Lankford, Dr. James T. May, III, and Dr. Charles O. Watlington, all of Richmond. They will be formally inducted at the meeting in Washington at which Dr. Hook will take office as president.

Two Tidewater physicians are new members of the Board of Commissioners of the Eastern Virginia Medical Authority. Dr. John D. Hopkins, radiologist, was appoint-

ed by the city of Norfolk, and Dr. Thomas W. Sale, surgeon, was appointed by the Hampton city council.

Dr. Girish Purohit, South Boston, has been elected a fellow of the American College of Cardiology.

The recommendations of his peers put the name of Dr. Milton T. Edgerton of Charlottesville on a list of "120 Best Doctors in America" published by Good Housekeeping

magazine. Department and clinical program chiefs at 87 medical schools were asked to name the doctors they consider the leaders in 24 medical specialties, and the names most often mentioned made up the list.

After 16 years as Norfolk's public health director, Dr. Harry S. Wise has retired, ending a tenure distinguished by the initiation of a program to prevent lead poisoning in children that became a model for the nation. Dr. Wise also helped found the Foodbank of Southeastern Virginia, the state's first foodbank for the poor, and to Norfolk's public health services added clinics for the elderly, for children, and for newborn babies and their mothers.

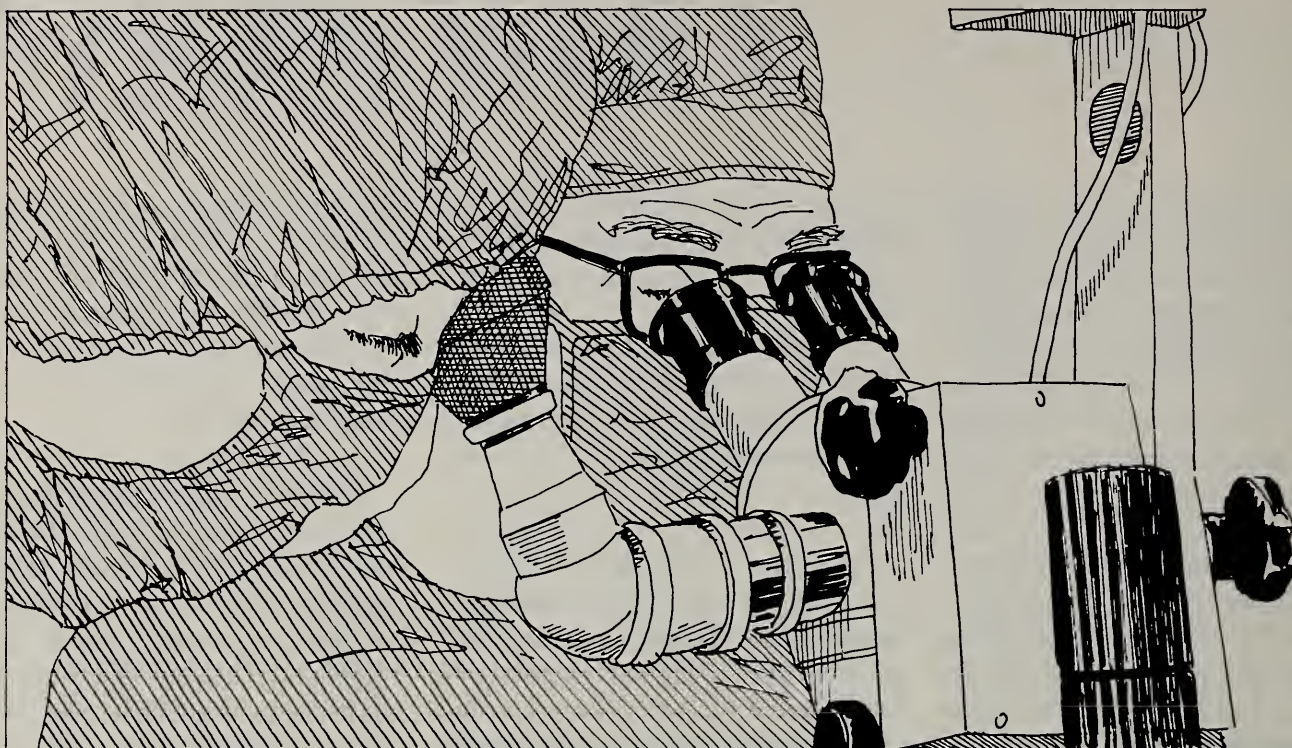
Now 70, Dr. Wise was 33 when he graduated from the medical school at Louisiana State University in Baton Rouge. He spent nearly 20 years as a surgeon with the U.S. Public Health Service before opting for preventive medicine.

Dr. Eric J. Sorenson has assumed the presidency of the Lynchburg Academy of Medicine; Dr. Robert W. Poole, Kilmarnock, has been installed as president of the Northern Neck Medical Association; and Dr. Ratnaker Lawande, Manassas, is the new president of the Prince William County Medical Society.

New president of the Washington Academy of Neurosurgery is Dr. James W. Preuss, Alexandria, who has held many positions of leadership in Northern Virginia's medical community, including the presidency of the Alexandria Medical Society.



President elect Hook making rounds.



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\*JAMA, Volume 248, No. 3, pages 336-339  
Yearbook of Medicine, 1983, pages 66-67  
Infectious Diseases, 1-84, pages 4-5, 8-9, 11

# MEDICINE AND THE LAW

## Review Panels in Virginia 1972–1982

*The following information was compiled by Kinloch Nelson, MD, until recently The Medical Society of Virginia's Director of Continuing Education; R. Carter Scott, Richmond, defense attorney with the law firm of Browder Russell Morris & Butcher; and Richard Immel, of the Society's staff.*

In 1976 the General Assembly added Sections 8–911 through 8–922 to Chapter 39 of Title 8 of the Virginia Code setting up medical malpractice review panels, with the objectives of reducing costs and speeding up the litigation process. Section 8–913 reads:

*The Medical Review Panel shall consist of (1) three impartial attorneys and three impartial health care providers licensed and actively practicing their professions in the state, and (2) one sitting judge of a circuit court who shall serve as chairman of the panel. The chairman shall have no vote except in the case of a tie vote. The medical review panel shall be selected by the Chief Justice of the Supreme Court of Virginia from a list of health care providers submitted to him by the State Board of Medicine and a list of attorneys submitted by the Virginia State Bar. In the selection of the health care provider members, the Chief Justice shall give due regard to the nature of the claim and the nature of the practice of the health care provider. The members of the medical review panel shall be sworn by the chairman to reach an opinion faithfully and fairly.*

Section 9–917 defines the opinions to be rendered by such panels.

*A.(i) The evidence does not support a conclusion that the health care provider failed to comply with the appropriate standard of care; (ii) The evidence supports a conclusion that the health care provider failed to comply with the appropriate standard of care and that such failure is a proximate cause in the alleged damages; (iii) The evidence supports a conclusion that the health care provider failed to comply with the appropriate standard of care and that such failure is not a proximate cause in the*

*alleged damages; or (iv) The evidence indicates that there is a material issue of fact, not requiring an expert opinion, bearing on liability for consideration by a court or jury.*

*B. If the review panel's finding is that set forth in subsection A(ii) of this section, the panel may determine whether the claimant suffered any disability or impairment and the degree and extent thereof.*

### Experience

A total of 500 panels were conducted between November 1976 and February 1982. Information on 476 of these panels was available for study,<sup>1</sup> including these factors: the names of plaintiff and defendant and which brought the action; nature of the claim; jurisdiction; attorneys involved; professions from which the panels' three health care providers were drawn; insurance carrier; opinion rendered; any other disposition.

Of the total number of 776 medical review panels requested between November 1976 and December 31, 1983, defendants brought 51% of the actions and plaintiffs brought 49%.

The record showed that 392 of these panels were for claims against physicians and/or hospitals. The remaining 84 claims were against dentists (60), podiatrists (14), optometrists (4), pharmacists (3), chiropractors (2), and one nurse. The number of opinions is greater than the number of claims because where there were several defendants, there were several opinions.

These were the number of defendants by specialty: obstetrics/gynecology, 65; hospital, 53; internal medicine, 40; radiology, 6; orthopedic surgery, 55; anesthesiology, 6; psychiatry, 15; emergency medicine, 7; urology, 13; general and family practice, 40; neurosurgery, 14; general surgery, 65; plastic surgery, 11; pathology, 2; neurology, 1; dermatology, 8; pediatrics, 6; ophthalmology, 7; otolaryngology, 3.

For the action taken by the panels, see Tables 1 and 2.<sup>2</sup> It should be noted that 13 of the 392 claims did not show the outcome, and these data could not be ascertained.

The nature of the claims in the 392 panels is listed as follows: failure to diagnose, 91; foreign body left, 9; lack of informed consent, 9; medication error, 47; negligent or improper treatment, 131; surgical error, 103.

### Summary

The finding that the plaintiffs called 49% of the panels and the defendants 51% indicates that neither group looks on panels as a particularly favorable medium.

The panel process favors the defendant (63% of 396 requests).

The panel process avoids litigation, i.e., 127

claims were settled before trial, and only 73 (less than 20%) of the 396 dispositions against physicians and/or hospitals went to court.

This significant information was not available: the number of claims that would have gone to trial if the panel process had not existed, and the duration and costs of panels vs trials (some say trials last at least twice as long as panels).

1. From the Office of the Supreme Court of Virginia, courtesy of Robert Baldwin and Kathy Rice
2. Information supplied by defense attorneys, the St. Paul Fire & Marine Insurance Companies, and the Virginia Insurance Reciprocal

**Table 1. Actions of 379 Medical Review Panels on Claims Against Physicians and/or Hospitals and Hospital Personnel.**

#### Requested by Plaintiff

Panel Decision	No. of Opinions	Settled	No Further Action	Results of Cases Tried					No Further Information
				Non-Suited*	Decision for Defendant	Decision for Plaintiff	Appealed	Pending	
Found for defendant	120	26	65	6	12	2	2	5	2
Found for plaintiff	24	16	3	0	1	3	0	1	0
Defendant failed to comply but not proximate cause	4	4							
Need more information	8	2	0	1	3	0	0	1	1
Total	156	48	68	7	16	5	2	7	3

#### Requested by defendant

Found for defendant	92	9	60	8	11	0		3	1
Found for plaintiff	13	7	3	1	1	1	1	1	0
Defendant failed to comply but not proximate cause	5	2	1	1		1			
Need more information	2	1	1						
Total	112	19	65	10	12	2	1	4	1

\* Case went to trial; one side withdrew with option of resuming within six months.

**Table 2. Actions on 141 Cases After Medical Review Panel Was Requested But Never Met.**

	No. of Cases	Settled	No Further Action	Results of Cases Tried					No Information
				Non-Suited*	Decision for Defendant	Decision for Plaintiff	Appealed	Pending	
Requested by defendant	62	23	33	2	1			1	2
Requested by plaintiff	79	37	29	3		1		2	7
Total	141	60	62	5	1	1	0	3	9

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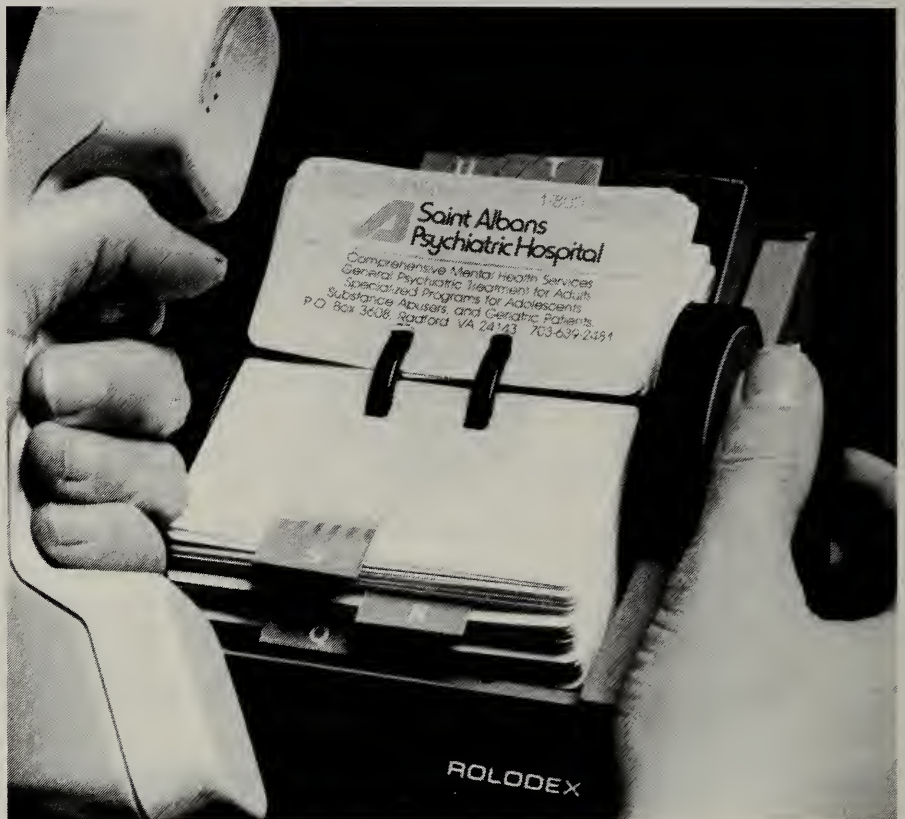
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# RETIRED RETURN TO SENDER

John P. Lynch, MD, *Richmond, Virginia*

**W**ITH a rubber stamp that reads, "Retired—Return to Sender," the retired physician can stop any first-class mail he or she no longer wants to receive. Unwanted second-class newspapers and magazines can also be turned back in this way, but postal authorities do not permit its use on third-class mail. Those self-addressed cards that are often enclosed can be stamped and returned to signal your new retired status.

The "Retired—Return to Sender" designation also indicates to the retiring physician that he suddenly and permanently has stopped his lifelong career. Two reactions suddenly well up into his consciousness. The first is the shock that he will no longer see his patients, many of whom have become his friends of 20 or 40 years' duration or even more. The other reaction is one of great relief at not feeling responsible for their mental and physical complaints, some of which he had been able to offer little more than comfort and reassurance.

He precipitously discovers that his order of the day has been drastically altered. He no longer has to get up at a certain time, read the morning paper at a certain time, leave for the office at a certain time, and plan to return for supper in the evening as near to a certain time as he can make it. He knows that his days, which have been crowded with one human problem after another, are suddenly left to his own ingenuity to fill up with less demanding pursuits.

He is aware that the days seem longer, and since he is out of the mainstream of activities, his psychological boat is adrift at first without rudder or power. If he is not careful, the boat will land in the backwaters in stagnant pools and he will deteriorate. If he has planned something after retirement, he finally gets his boat started towards at least the sidelines of the mainstream. He welcomes any effort from outside to draw him back in.

His family support is more and more important. His wife feels a shock even as much as he does, and she becomes the helmsman for his drifting boat until he has adjusted to his changed situation.

Retirement can be an exciting change in one's life experience, or it can be a devastating experience from which recovery is difficult.

**T**HERE are many helping hands to guide the physician in the mechanics of his professional retirement. Among these are suggestions worked up by the American Medical Association and relayed to me by The Medical Society of Virginia when I asked for information. Here are some of the suggestions.

1. Apparently it is required by law or by practice that the physician write to each and every patient on his roll, explaining that he has retired from active practice and indicating what doctor or doctors he has chosen to follow up with their medical care, or,

if they please, how to secure their records by writing to his office and signing a release to transfer the records to a designated physician.

2. If he has leased property, for six months to a year prior to his retirement, he should notify his landlord.

3. A polished mail and telephone collection program should be developed for accounts receivable for one or two years before closing or as soon as possible.

4. Your employees should be notified of your retirement at least three months prior to that date. If you are practicing by yourself, you need to arrange for the disposition of office equipment and furniture two or three months before closing.

5. Insurance and liability policies, worker's compensation and so on will have to be attended to and turned over to a collector. Special liability insurance carriers must be contacted. If under a claims-made policy, arrange for your tail coverage. Accounts payable items: Notify all suppliers and request final statements. Notify utilities, including telephone, for the date you wish service to be discontinued. Keep your checking account open for at least three months after closing. Allow all bills to be paid.

6. File necessary tax forms. Notify Keogh and corporate retirement plans of your and your employees' intentions. Make arrangements for retention of business and personal records. Discontinue office magazine subscriptions. Cancel or change status in personal and professional associations. Leave forwarding address with your post office.

7. Donate any books or journals to a medical library.

8. Dispose of drugs according to Drug Enforcement Administration instructions.

9. Destroy unused prescription pads.

10. Store all diplomas, licenses and indications of medical membership.

11. Continue your answering service for three months to a year, depending on local circumstances.

12. Notify the State Board of Medicine, the Drug Enforcement Administration, and the State Commission of Narcotics and Dangerous Drugs; professional associations, such as American Medical Association; your specialty associations; major insurance carriers; Medicare, the state Medicaid program, local Blue Shield plans, and others.

13. Finally, be sure that your own personal and family health insurance is continued. If you have been in a group, you may have to switch types of insurance from group to personal or from one

insurance company to another, and if you switch insurance companies, you may find that you have a six-month waiting period before your new policy

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To read of another retirement, see page 120.

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takes effect. So it is wise to begin to think about your own health insurance for six months or a year before retirement.

**Y**OU may continue your membership in your local medical society as well as The Medical Society of Virginia and the AMA, though your dues may be eliminated. You may even continue your narcotic license, but it would be wise not to use it or write any other prescription or renewal prescription because of the malpractice implications. In other words, stop being a doctor.

If you serve on any committees in your constituent medical organization, as long as you are a member of these organizations, you may be asked to continue to serve.

You may be called to do community work, church work or perhaps other professional work not related directly to patient care. Most physicians find it very helpful for their own mental health to keep as active as possible provided their health permits it.

According to the Internal Revenue Service, you have lost the right to deduct travel and other expenses associated with attendance at medical meetings or courses. The issue is that since you no longer earn money from medical practice, you are no longer entitled to deductions for increasing your education for that practice. This is a disappointment to your travel plans for both yourself and your spouse and is part of the shock of retirement.

The important thing to remember is that there is a time to begin and a time to end your professional career. Both can be exciting if you maintain your perspective.

"Retired—Return to Sender" also reflects the physician's own sense of having been called to this great profession by his Creator and hence returned.

Dr. Lynch, a geriatrician, retired from practice in June 1984 and is now writing a history of the McGuire Clinic, with which he was associated for 47 years. He is a member of The Medical Society of Virginia's Committee on Aging. Address correspondence to him at 118 Paxton Road, Richmond VA 23226.

If you would like a complete set of the AMA guidelines for professional retirement that Dr. Lynch refers to, write to Virginia Medical, 4205 Dover Road, Richmond, VA 23221.

# The Cochlear Implant: Help for the Profoundly Deaf

Paul R. Lambert, MD, *Charlottesville, Virginia*

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Although the cochlear implant cannot offer normal hearing to the profoundly deaf nor even the ability to understand speech without lip reading, it can provide such marked enhancement of the capacity to differentiate sounds that the deaf person's self-sufficiency, sense of security, and powers of socialization are significantly improved.

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**S**ENSORINEURAL hearing loss, or nerve deafness, is one of the major health problems in this nation in terms of incidence, affecting nearly one out of every 15 Americans. For some of these persons, their loss is profound, with little or no meaningful sound awareness, even with the use of the most powerful hearing aids. This loss can be caused by a variety of disorders, including meningitis, rubella and other viruses; ototoxic drugs; trauma; Meniere's disease; and hereditary factors. In most cases the sensory structures (hair cells) have been destroyed, but some afferent nerve fibers and/or their cell bodies (spiral ganglion cells) remain intact.

Fortunately, most persons with sensorineural hearing loss have sufficient residual hearing to permit the successful use of hearing aids. Profound-

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The Lions of Virginia Hearing Foundation generously supported the cochlear implant program.

ly deafened persons, however, must rely on lip reading and sign language for communication. The impact of deafness on such an individual is protean and cannot fully be appreciated by those who hear. Not only is language and communication impaired, but physical safety is jeopardized, socialization is altered, and in short, all facets of a person's interaction with the environment are affected.

In the last two decades, the efforts by many disciplines have combined to make possible the restoration of sound to the totally deafened individual. This is accomplished by electrical stimulation within the inner ear by the cochlear implant.

The cochlear implant is a device implanted within the cochlea that provides sound detection by direct electrical stimulation of remaining auditory nerve fibers. In a broad sense, the cochlear implant attempts to replace the function of the hair cells, which are responsible for transforming the mechanical energy of sound carried by the middle ear ossicles and cochlear fluid into electrical impulses carried by the auditory nerve.

The cochlear implant does not restore normal hearing or the ability to clearly understand speech

without using lip reading, but the potential benefits are impressive and very important for the profoundly deaf. The fact that almost 90% of persons who have received the cochlear implant continue to use it on a regular daily basis attests to its value.

Late last year the Food and Drug Administration approved the cochlear implant, so that its use is now covered by private insurance companies, Medicare and Medicaid.

The following case reports of the first two cochlear implant patients at the University of Virginia Medical Center illustrate the implant's effectiveness.

### Case Reports

*Case Report 1.* K.B. is a 42-year-old female who developed an idiopathic, profound, bilateral sensorineural hearing loss. This loss occurred over several months and was not associated with vertigo. There was no history of exposure to ototoxic agents. The physical examination, with particular attention to the neurologic system, was normal. Extensive radiographic and serologic evaluations were negative, including tests for autoimmune inner ear disease. CSF analysis was normal. A trial of steroid therapy was not helpful.

The patient was observed for one year and no hearing recovery occurred. She then underwent audiological evaluation which again showed profound bilateral sensorineural hearing loss. Based on the special audiometric testing, she was deemed a candidate for the cochlear implant. She underwent that surgery without complication in February 1984 and successfully completed the rehabilitation program one month later. Followup audiometric testing showed that she could now hear sounds at a 45-55 decibel hearing level (dBHL), which is well within the normal conversational range. Her scores on the various special tests all showed very significant improvements.

The many benefits related by the patient were summarized when she said, "It [the cochlear implant] has been like a rebirth for me—it now seems like the world stops when I take it off."

*Case Report 2.* R.Y. is a 38-year-old male who was born with a total hearing loss in the right ear and a partial hearing loss in the left ear. For most of his life he had been able to use a left hearing aid successfully.

Six months prior to evaluation at the University of Virginia Medical Center, he experienced vertigo and a viral-like illness lasting several days, then subsequently noted that he could no longer hear from the left ear. He was treated medically, includ-

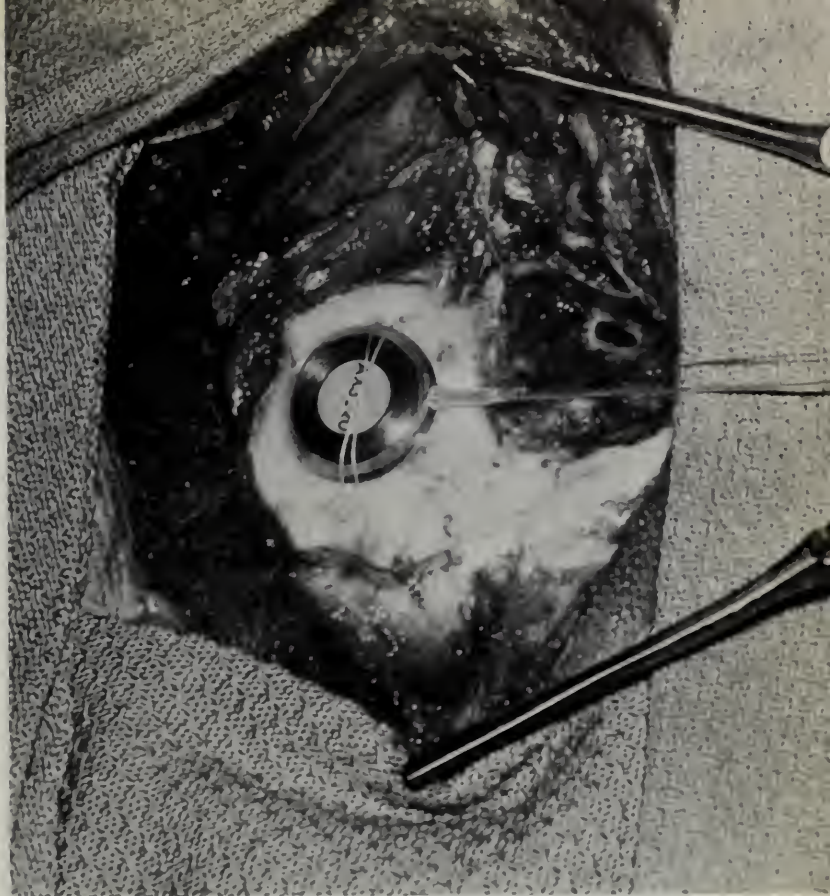


Fig. 1. Surgical photograph of internal coil in place on mastoid bone.

ing the use of antibiotics, diuretics and steroids, but regained no hearing. A thorough evaluation was negative for any specific cause of the inner ear loss, and a viral labyrinthitis was suspected.

Audiometric testing showed a profound sensorineural hearing loss bilaterally. Based on results of the cochlear implant evaluation, the patient was considered a good candidate. He underwent successful surgery for implantation of a left cochlear implant in March 1984 and then completed the rehabilitation program. The patient's performance after the implant showed significant improvements on all the audiometric tests compared to the preoperative values. He is now able to readily hear sounds at a conversational level and some sounds softer than this. The patient's praise for the implant was similar to that reported in the first case.

### The Cochlear Implant

Electrical stimulation was first successfully used in the treatment of profound sensorineural hearing loss in France in 1957.<sup>1</sup> In the following decade, several different devices, both single- and multi-channel, were developed and tested in this country. To date, these various devices all provide about the same auditory information to the patient, and one has not proven clearly superior to another. By far the largest clinical experience to date has been gained by William House and co-investigators.

They have implanted over 300 patients with a single channel electrode system, with most of this work having been accomplished in the last 10 years. The House-Urban system<sup>2</sup> consists of an internal, or surgically implanted, device (Fig. 1) and several external parts that are worn by the patient (Fig. 2).

The internal device is an electromagnetic coil with two attached platinum wire electrodes. The coil measures approximately  $2 \times 2 \times 1\frac{1}{2}$  cm. The active electrode is inserted into the basal turn of the cochlea and the other wire electrode is used as the ground.

The microphone, which measures 1 cm in greatest dimension, is worn around the head and neck area, such as on spectacle frame or shirt collar. From the microphone the signal is carried by a wire cord to the stimulator unit. This unit measures approximately  $6 \times 8 \times 1\frac{1}{2}$  cm and can be placed in a shirt or blouse pocket. It consists of a pre-amplifier, a band pass filter (200-4000 Hz), and an oscillator that generates a 16-kHz signal. The incoming audio-signal amplitude modulates the 16-kHz wave, and this signal is then amplified and carried by a wire cord to the external coil. The stimulator unit has both a volume control to adjust the output level and a modulation control to adjust the sensitivity of the device to sound. It is powered by two 1.4V alkaline batteries.

The external coil is similar in size and composition to the internal coil. It is placed on the skin surface behind the ear and directly over the implanted coil; it is maintained in position magnetically. Through electromagnetic induction the signal is transmitted across the skin to the internal coil. Current then flows between the active and ground electrodes, creating an electrical field that stimulates auditory nerve fibers. Figure 3 shows sche-

matically the arrangement of the internal and external coils.

### Patient Selection

Potential cochlear implant patients are selected on the basis of medical and audiological criteria. The medical evaluation includes a history and physical examination, vestibular tests, x-rays of the inner ear and psychological tests.

The most crucial aspect of the pre-implant evaluation is the audiological testing. Standard audiological tests and a special test battery designed for the severely hearing impaired are used to assess the extent of hearing loss.<sup>3</sup> The cochlear implant is presently being considered only for those patients with a profound sensorineural hearing loss in both ears. A critical aspect of the audiological evaluation is the subject's performance using several hearing aids; the implant is recommended only when performance with optimal hearing aids is below that achieved by the average cochlear implant patient.

The pre-implant evaluation also includes extensive counseling to insure that the subject has a realistic assessment about the implant. The limitations and benefits are explained fully, and the opportunity is provided to meet with a previously implanted patient.

Most patients who have received the cochlear implant developed their deafness after acquiring speech and language (post-lingually deaf). The cochlear implant can also be used successfully in congenitally deaf individuals who have little or no prior experience with sound (pre-lingually deaf).<sup>4</sup> Special rehabilitative procedures are required for these latter patients.

### Rehabilitation

Four weeks following surgical implantation, the patient receives the external components and begins the rehabilitation program. This program consists of an intensive training period of 1-2 weeks followed by brief, periodic visits over the subsequent 12 months. During the rehabilitation period, the patient is reintroduced to sound as provided by the cochlear implant. Because the quality of this sound differs from normally perceived sound, the patient must be taught how to listen to speech and environmental noise so that perceived sound is at the maximum.

The patient is given home assignments to be mailed back at regular intervals. These are designed to monitor the patient's progress with the cochlear implant, since the learning process with the device is a continuous one.



Fig. 2. External components: Microphone, signal processing unit, external coil.

## Risks

Potential risks of cochlear implant surgery include those involving the operation itself and those associated with the device and the electrical currents generated. The operative risks are the same as those for mastoid and middle ear surgery: infection, bleeding, facial paralysis, dizziness, etc. All of these potential complications are extremely rare.

The internal coil is biocompatible, and rejection is rare. The stimulus level used is well below that which could cause electrolysis and potential tissue damage at the electrode tissue interface.<sup>5</sup> Mechanical damage to the basilar membrane and osteoneogenesis within the cochlea are possible and have been described in several human temporal bones studied.<sup>6</sup>

The long-term risks of electrical stimulation of the auditory system are unknown. Clinical studies over 10-15 years, however, have shown no adverse effects.<sup>5</sup> For example, there has been no deterioration over time in electrical thresholds, audiological performance or neuropsychological function. This data has been generated from approximately 300 patients with the cochlear implant who have over 1 million cumulative hours of electrical stimulation. Approximately 8% of the implanted coils have malfunctioned. Most of these have been successfully replaced.

## Benefits

Postoperative testing of cochlear implant patients show that tones across the frequency range can now be readily heard at mean intensity levels between 45 and 55 dBHL.<sup>3</sup> These levels are within the normal conversational range, thus allowing cochlear implant users to hear some soft and most medium and loud sounds occurring around them. The basic function of the auditory system, that of monitoring the environment, is thus reestablished with the implant. Various warning signals, such as a siren, car horn, or alarm, can now be heard. The implant user can hear a door bell, a telephone, or people calling his or her name. In short, most implant users report feeling much more secure about physical safety.

In addition, the implant provides near normal ability to discriminate intensity and durational differences in sound. There is frequency discrimination below 500 Hz but little above that. Although speech cannot be understood, stress patterns, syllabication, and rhythm cues are available. With this information the implant user is able to differentiate between many different sounds.

This ability to hear certain aspects of speech also

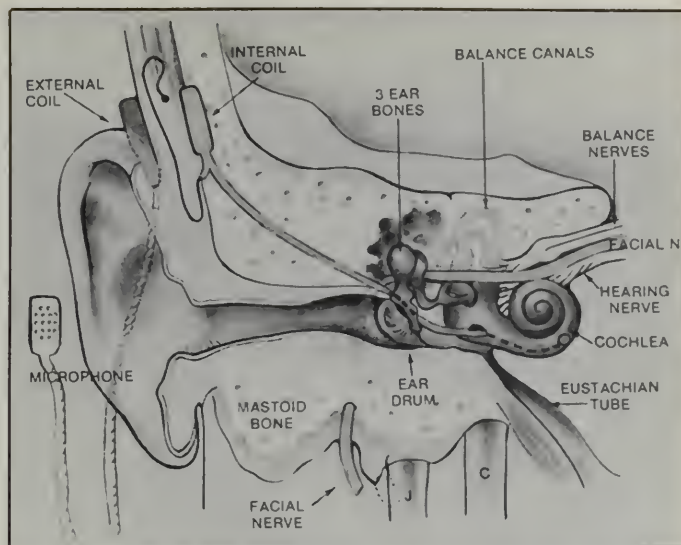


Fig. 3. Schematic diagram showing all elements of cochlear implant.

greatly helps with lip reading and voice production. Since less than 50% of spoken words are visible to the good speech reader, hearing the intensity and timing elements of the sound can markedly improve speech reading. Because the person can now hear his own voice, there is much better control of volume and intonation.

The cochlear implant also provides psychosocial benefits.<sup>7</sup> For example, self-sufficiency is enhanced, emotional distress is lessened, and participation in group activities is increased. These observations have been documented from questionnaires given to cochlear implant subjects and to individuals closely related to them.

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# Management of Gastric Polyps: Case Reports

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Gastric polyps usually are discovered during radiographic or endoscopic examinations of patients with nonspecific upper gastrointestinal symptoms. Endoscopic polypectomy is the treatment of choice. The author illustrates with five cases seen in a community hospital.

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**G**ASTRIC polyps, in contrast to colon polyps, are encountered so infrequently by the clinician that specific management is often unclear. Neoplastic colon polyps greater than 1 cm in diameter are quite common, with an incidence of 10% or higher in the older population, while gastric polyps are rare, with a reported incidence approximating .5%.<sup>1</sup> Occult or overt rectal bleeding is the most common presenting symptom of colon polyps. Gastric polyps, in contrast, are most often discovered during radiographic or endoscopic examinations in patients with nonspecific upper gastrointestinal symptoms. However, bleeding from an ulcerated polyp or intermittent obstruction from a pedunculated polyp in the antrum prolapsing through the pylorus may be the only symptom that can be definitely ascribed to gastric polyps.<sup>2</sup>

Colonoscopic polypectomy is the recommended therapy for most colon polyps, with surgery reserved for the very large polyp or the polyp showing invasive malignancy. Similarly, endoscopic polypectomy has become the treatment of choice for pedunculated gastric polyps over the past decade. While the vast majority of gastric polyps are epithelial, other polypoid lesions are occasionally encountered, including lipomas, leiomyomas, neurofibromas, pancreatic rests and gastric carcinoids.<sup>3</sup> These

lesions may be quite firm or vascular, not readily amenable to endoscopic polypectomy, and require individualized management. Representative cases seen by the author in a community hospital are presented and discussed.

## Case Reports

*Patient 1.* A 70-year-old man presented to the surgical service with an inguinal hernia and vague lower abdominal pains. The hemoglobin was 15.2gm; other laboratory studies were normal except for a hemoccult positive stool specimen. During the workup, an upper gastrointestinal series showed a rounded polypoid lesion in the body of the stomach. An upper pan endoscopy exam revealed a 2.5 cm pedunculated polyp, which was snared, excised and retrieved. Histologically, this proved to be a benign hyperplastic polyp.

One year later an x-ray suggested a small polyp in the stomach. At endoscopy a small 7 mm hyperplastic polyp arising from the stalk of the original polyp was identified and excised.

*Patient 2.* An 89-year-old woman presented to the hospital with chest pain characteristic of angina pectoris and with a several month history of postprandial epigastric and left upper quadrant abdominal pains. Radiologic studies showed a pedunculated polyp in the gastric antrum which intermittently prolapsed into the duodenal bulb (Figs. 1 and 2). An upper endoscopy exam revealed a lobulated 2 cm polyp on a pedicle. With the electrocautery snare this was excised in piecemeal fashion. Slight bleeding was observed and controlled with the cautery wire. Histologic sections of the polyp revealed a benign hyperplastic polyp.

*Patient 3.* This 47-year-old man presented with a swollen leg and no gastrointestinal symptoms and was found to have an iron deficiency anemia with a hemoglobin 9.3gm. The upper GI series revealed a 2.5 × 3 cm rounded intraluminal mass in the body of the stomach. At upper endoscopy a large polyp on a short pedicle was biopsied and reported to be a papillary adenoma. In a subsequent procedure the polyp was cauterized and excised piecemeal. A small amount of bleeding occurred but ceased spontaneously. Histologically, the polyp was a papillary adenoma with focal well differentiated adenocarcinoma. A wedge gastric resection was done with no residual tumor found.

*Patient 4.* This 78-year-old woman presented with a five year history of epigastric and burning retrosternal pain. An upper GI series showed a deformed appearance of the lower body and antrum of the stomach with thickened rugal folds and

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polypoid defects. An initial gastroscopy showed inflammation with patchy superficial ulceration and a small antral polyp. Biopsies and brushings showed only chronic inflammation and granulation tissue. After an unsuccessful trial with cimetidine and antacids, a repeat endoscopy was performed three weeks later. In addition to numerous mucosal biopsies, a 1 cm polyp on a tiny pedicle was excised. On this occasion the biopsies showed a poorly differentiated signet ring cell adenocarcinoma and a benign adenomatous polyp. The patient subsequently underwent an 80% gastrectomy with the finding of peritoneal tumor implants.

*Patient 5.* This 75-year-old woman presented with a low back pain and an iron deficiency anemia and hemoglobin of 9 gm. A cecal lesion was seen on barium enema x-ray, while an upper GI series showed a rounded 1.7 cm lesion along the lesser curvature of the gastric antrum. Upper endoscopy showed a sessile vascular polyp which bled easily when biopsied or brushed. The biopsies showed focal malignant changes, possibly representing a carcinoid tumor. The patient underwent a right colectomy for a carcinoma of the cecum and subtotal gastrectomy. The gastric polypoid lesion was a localized sessile carcinoid tumor of the antrum without visible spread.

## Discussion

The histologic classification of gastric epithelial polyps in the literature is a source of some confusion. While some authors distinguish regenerative and hyperplastic adenomatous<sup>4</sup> gastric polyps, the separation of gastric polyps into hyperplastic (regenerative) and adenomatous polyps seems preferable.<sup>5</sup>

Hyperplastic gastric polyps are the most commonly encountered polyps in the stomach, representing over 75% of such lesions. These may be single or multiple, sessile or pedunculated, and may occur at any site in the stomach. Microscopically, hyperplastic polyps are composed of branching, cystically dilated glands lined by cells identical to those of the surface gastric epithelium. The stroma of these polyps may be edematous and contain bundles of smooth muscle fibers from invaginated muscularis mucosae.<sup>6</sup> Since hyperplastic polyps represent a reactive change of normal mucosa, they are not true neoplasms.

Adenomatous polyps are most often located in the antrum, are usually solitary and may be sessile or pedunculated. Histologically, most gastric adenomas resemble colonic adenomas. The gastric adenomatous polyps are composed of cells with

hyperchromatic nuclei, frequent mitotic figures and occasional cystic glands. Microscopically, abrupt transition between the adenomatous epithelium of



**Fig. 1 (above).** Upper GI series shows a polyp initially present in gastric antrum.



**Fig. 2 (right).** Spot film, same patient, shows prolapse of polyp into duodenal bulb.

the polyp and adjacent surface epithelium may be seen. Unlike the hyperplastic polyp, the adenomatous gastric polyp appears to be a true neoplasm.<sup>6</sup> Adenomas may also develop a villous pattern. When multiple, gastric adenomatous polyps may be associated with familial polyposis of the colon.<sup>7</sup>

Gastric adenomatous and hyperplastic polyps are commonly associated with gastric achlorhydria and atrophic gastritis.<sup>2,5,6</sup> However, the malignant potential of these polyps differs significantly. The hyperplastic polyp is not thought to have malignant potential, though associated malignant changes have been rarely reported.<sup>8</sup> Moreover, hyperplastic polyps may be found in a stomach harboring a gastric malignancy at a different location.<sup>2,5,6</sup> In contrast, the adenomatous gastric polyp has a definite size dependent potential for malignant change similar to the adenomatous polyp of the colon. Tomasulo found an incidence of 24% carcinoma in adenomatous polyps greater than 2 cm and only 4% in polyps smaller than 2 cm.<sup>6</sup> Moreover, there is a high incidence of invasive carcinoma elsewhere in the stomach when an adenomatous polyp is encountered, as illustrated by Patient 4. Gastric polyps of all types occur much more frequently in the older population. In a series of 43 patients undergoing gastric polypectomies, the age ranged from 43 to 86, with a mean of 66 years.<sup>9</sup>

All patients with polyps detected by x-ray should be endoscoped since there is little to distinguish these polypoid lesions radiographically. Sessile polyps should be biopsied, and if adenomatous, excised endoscopically or surgically. Endoscopic polypectomy is the treatment of choice for adenomatous polyps smaller than 2 cm.<sup>10</sup> The adenomatous polyp greater than 2 cm should be excised endoscopically or surgically. Histological classification of gastric polyps by endoscopic biopsy alone does not appear to be sufficient to screen for polyps with malignant potential. Seifert and Elster reported that in a series of 24 gastric polyps removed endoscopically, the histological classification was modified in 75% once the entire polyp was available for tissue sectioning.<sup>11</sup>

Gastric polypectomy is technically more difficult than colonic polypectomy. In the colon many polyps are on stalks, and small sessile lesions tend easily to permit safe polypectomy. Gastric polyps, however, are often sessile and quite vascular. Moreover, a gastric carcinoid or leiomyoma may mimic a sessile gastric epithelial polyp. Endoscopic polypectomy of such lesions is associated with a greater risk of complications. Complications recognized from endoscopic polypectomy include hemor-

rhage, perforation and the development of a symptomatic ulcer. In one series 18% of patients had a residual ulcer one week post gastric polypectomy which healed at eight weeks.<sup>11</sup> Some endoscopists recommend an ulcer regimen for two weeks after an upper gastrointestinal polypectomy.<sup>12</sup> Retrieval of an excised polyp may be difficult, but may be facilitated by using parenteral glucagon during the procedure.<sup>9</sup>

In one large study primary benign gastric polyps recurred in 6.1% of patients with a previous gastric polyp.<sup>13</sup> In 32.5% of the recurrences new polyps grew at different locations in the stomach. Thus endoscopic surveillance, perhaps annually, has been recommended in the patient with a previous adenomatous gastric polyp.<sup>9</sup>

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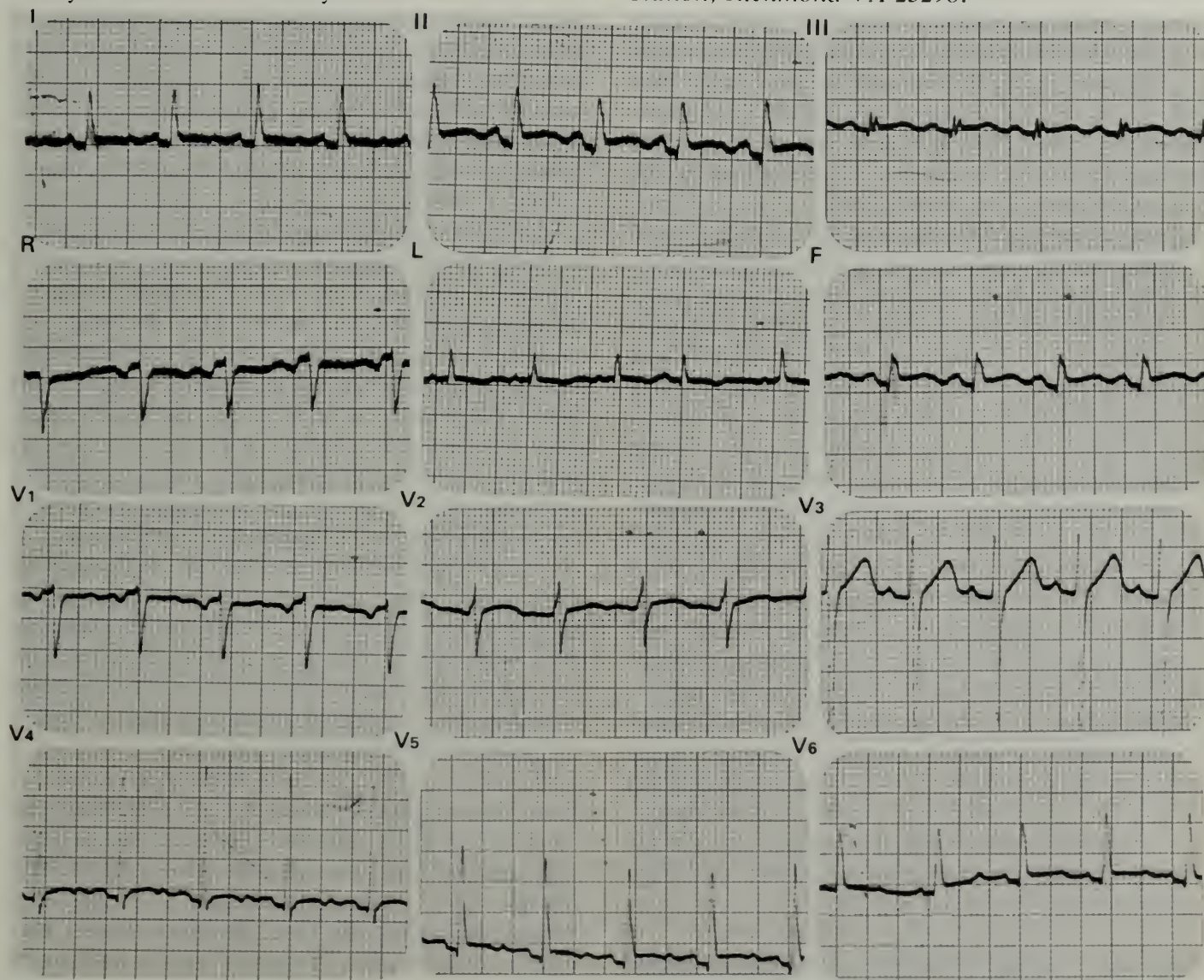
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# Can You Diagnose This?

A medical puzzle prepared by  
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This electrocardiogram was obtained from a 63-year-old woman when she was admitted with rheumatoid arthritis, hypertension with renal insufficiency, tuberculous osteomyelitis.

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DIAGNOSIS/DISCUSSION ON PAGE 116

# ABSTRACTS

*These are abstracts of papers to be presented at the 1985 regional meeting of the Virginia Chapter, American College of Physicians, in conjunction with the Virginia Society of Internal Medicine, on February 22-24 at the Omni Hotel in Norfolk. Dr. Kenneth H. Hyatt is program chairman.*

**Citrate—An Alternative Anticoagulant During Hemodialysis.** Patricia E. Bell, MD, William R. Bixenman, MD, William K. Stacy, MD, and Domenic A. Sica, MD, *Richmond*.

Heparin remains the mainstay of anticoagulant (AC) therapy for the prevention of clotting in the dialysis assembly during hemodialysis. Unfortunately, its use poses a risk in the patient who is either actively bleeding or prone to hemorrhage, requiring that alternative methods of AC be sought. One such method employs the regional infusion of a citrate-containing solution. Citrate infused into the inflow line of a dialysis circuit complexes with ionized calcium, thereby limiting its ability to serve as a co-factor in the clotting process. A calcium-free bath facilitates the removal of the calcium-citrate complexes and 5%  $\text{CaCl}_2$  infused into the line exiting the dialyzer prevents systemic hypocalcemia and reverses anticoagulation.

Twelve patients undergoing 13 hemodialyses were given trisodium citrate (42 gms/L/D<sub>5</sub>W) at a rate sufficient to maintain activated clotting times at least 50% above baseline values (300–450cc/hour). Blood flow was maintained at 200cc/minute and membrane pressures adjusted to compensate for the additional fluid load. This procedure proved remarkable safe with no side effects occurring in any of the 12 patients. The signs and symptoms of citrate intoxication are those of hypocalcemia and these were not observed with serum calcium post-dialysis being in the normal range. The citrate solution is hypertonic (354mEq/L) in respect to sodium, but despite this, hyponatremia did not occur. Clearances of BUN and creatinine did not differ from those obtained in similar dialyses employing heparin. Post-procedure prothrombin time and partial thromboplastin time were within normal limits in all instances. We conclude that citrate infusion is a safe and effective means of anticoagulation during hemodialysis. This procedure should gain wide utility in the therapy of active bleeders or those at risk to bleed.

**Progression of Membranous Nephropathy to Acute Crescentic Rapidly Progressive Glomerulonephritis**

**and Response to Pulse Methylprednisolone.** John D. Koethe, MD, J. L. Glickman, MD, Benjamin C. Sturgill, MD, and Warren K. Bolton, MD, *Charlottesville*, and J. S. Gerig, MD, *Danville, Pennsylvania*.

Since the original report of Klassen et al, there have been only sporadic reports of membranous nephropathy (MN) evolving to acute crescentic rapidly progressive glomerulonephritis (ACRPGN). A 24-year-old patient with biopsy documented MN since age 16 developed rapidly progressive renal failure after seven years of normal renal function. Initial serum creatinine (Scr) was 0.6 mg/dl with a total urinary protein (TUP) of 3.7 gm/24 hrs. Renal function remained normal on tapering high-dose, alternate-day steroids with poor compliance. Acute renal failure with severe hypertension, anasarca, and oliguria occurred following discontinuation of therapy. She had a creatinine clearance (Ccr) of 13.6 ml/min, Scr of 8.4 mg/dl, TUP of 15 gm, and an active urinary sediment. Repeat biopsy revealed extensive epithelial crescent formation superimposed on previously identified MN. Serologic and immunofluorescent studies revealed no other etiology for ACRPGN. Antiglomerular basement membrane assay was negative. Pulse methylprednisolone resulted in significant improvement in renal function with Ccr of 30 ml/min and Scr of 2.8 at eight months. Literature review discloses no other favorable outcomes in the three previous case reports of MN evolving into RPGN. Additional review reveals seven cases of ACRPGN and concomitant findings of MN with favorable outcomes occurring only in two cases associated with infection. ACRPGN should be considered a treatable etiology of acute renal failure in the setting of membranous nephropathy.

**Zinc Absorption in Uremia.** Anne King, MD, Winnie Chan, DrPH, Domenic A. Sica, MD, James Chan, MD, Robert Centor, MD, Greg Miller, PhD, *Richmond*.

Zinc deficiency has been demonstrated in end-stage renal disease. Previous studies have demonstrated a specific gastrointestinal-absorptive de-

fect in uremia. We have therefore employed a zinc tolerance test (ZTT) to characterize the effect of vitamin D supplementation on zinc absorption.

Six healthy controls and six stable hemodialysis patients participated in the study. All medications were withheld for seven days prior to the study. Each subject was fasted overnight and throughout the study and then ingested 25 mg of elemental zinc as zinc sulfate dissolved in 30 cc of deionized water. Baseline and hourly plasma zinc values were obtained for four hours. After the initial ZTT, subjects were placed on synthetic 1,25(OH)<sub>2</sub>D<sub>3</sub> (.25  $\mu$ g twice daily) for two weeks, and the ZTT repeated. Data is presented as a mean  $\pm$  SEM.

	0	60	120	180	240
Control P <sub>Zn</sub> ( $\mu$ g/dl)	99 $\pm$ 5	187 $\pm$ 32	208 $\pm$ 17	182 $\pm$ 16	153 $\pm$ 12
Dialysis P <sub>Zn</sub> (pre-vit D)	85 $\pm$ 5	115 $\pm$ 13	131 $\pm$ 12	133 $\pm$ 16	125 $\pm$ 14
Dialysis P <sub>Zn</sub> (post-vit D)	98 $\pm$ 6	172 $\pm$ 11	177 $\pm$ 11	151 $\pm$ 13	152 $\pm$ 6

These studies reveal that dialysis patients have lower basal plasma zinc values than controls and that these values normalize with vitamin D supplementation. Significantly greater absorption is evident at the time intervals of 60 and 120 minutes and overall absorption values approach those seen in controls.

Conclusion: In uremia, orally administered synthetic 1,25(OH)<sub>2</sub> significantly improves the defect in zinc absorption.

**Thyroid Deficiency Causes Megaloblastic Bone Marrow.** Steven Prince, MD, Janaka-Raj, MBBC, James Hsiu, MD, and Herschel L. Estep, MD, *Norfolk*.

Addisonian pernicious anemia is a known association of myxedema, and macrocytic anemia that accompanies hypothyroidism generally can be traced to either a folate or vitamin B<sub>12</sub> deficiency. A macrocytosis, without folate or B<sub>12</sub> deficiency may also occur in association with hypothyroidism, but true megaloblastic bone marrow changes in this situation have not been previously documented. We studied a patient who had spontaneous hypothyroidism with serum T4 2 (normal 5–15)  $\mu$ m/dl, T3 RU 16 (22–34%), TSH 60 (1–10) uIU/ml and macrocytosis (MCV 120), but no anemia (Hgb 14 g/dl) and bone marrow revealed abundant true megaloblasts. Vitamin B<sub>12</sub>, folate levels and the Schilling test were normal, even without intrinsic factor. Combined therapy with B<sub>12</sub> and folate for four weeks was without effect on macrocytosis, reticulocytes, or bone marrow megaloblasts. However, following

administration of thyroxine, the measured parameters returned toward normal with MCV falling to 95 fl. At a later date, inadvertent withdrawal of thyroxine resulted in a return of the macrocytosis.

Conclusion: Hypothyroidism, unassociated with either vitamin B<sub>12</sub> or folate deficiency, causes megaloblastic bone marrow and macrocytosis.

**Diabetic Ketoacidosis Presenting with a Normal Anion Gap.** Richard W. Ashburn, MD, Stephen Beutel, MD, David G. Kemp, MD, and George T. Gamblin, MD, *Portsmouth*.

Historically, the acid-base derangement in diabetic ketoacidosis has been attributed exclusively to the accumulation of ketoacids, resulting in a typical wide anion gap metabolic acidosis. Hyperchloremic metabolic acidosis complicating diabetic ketoacidosis during the recovery phase has been documented for many years. Only recently has its contribution at a presentation been recognized. We report an unusual patient with diabetes mellitus who presented with hyperglycemia, ketonemia and pure hyperchloremic acidosis. A 27-year-old woman with noninsulin dependent diabetes mellitus (NIDDM) presented with a four-day history of sore throat, headache, fever and chills. A diagnosis of NIDDM was made at 11 years, and until four days prior to admission she had been treated with chlorpropamide 500 mg daily. She denied diarrhea, usage of ethanol or other medications, ureteroenterostomy or kidney disease. Physical examination was remarkable for a temperature of 37.8 C, injected pharynx with exudate and bilateral anterior cervical adenopathy. Leukocyte count was 16,800, serum glucose 247 mg/dl, sodium 132 mEq/L, potassium 3.7 mEq/L, chloride 106 mEq/L, BUN 8 mg/dl, creatinine 1.2 mg/dl, bicarbonate 12 mmHg; calculated anion gap was 14 mEq/L—normal 10–14 mEq/L for Na-is (Cl + HCO<sub>3</sub>), serum ketones positive (nitroprusside reaction). Urinalysis showed glycosuria and heavy ketonuria. She was treated with lactated Ringer's solution, parenteral antibiotics, and a constant infusion of regular insulin. Resolution of acidosis was noted at 35 hours. This case illustrates that a normal anion gap alone cannot be used to exclude the presence of diabetic ketoacidosis.

**Elevation of Serum Calcium with Theophylline Intoxication.** Milton L. McPherson, MD, Erol Atamer, MD, David Maxwell, MD, Steven Prince, MD, and Herschel Estep, MD, *Norfolk*.

Theophylline, a xanthine derivative commonly used in the treatment of bronchial asthma, is known

to increase tissue and medium cyclic adenosine mono-phosphate (CAMP) by inhibition of cyclic nucleotide phosphodiesterase. It has also been shown that theophylline and other methylxanthines can cause translocation of intracellular calcium from skeletal muscle in vitro. On routine admission lab, we noted two patients found to have elevated serum calcium when they were theophylline-toxic. A study was performed by obtaining serum samples on patients with theophylline levels greater than 25  $\mu\text{m}/\text{ml}$ . These samples were analyzed for calcium content by atomic absorptive spectrophotometry. Other samples from these patients, which were obtained during their hospital stay, were also analyzed for calcium content. These patients were noted to have elevated serum calcium levels with toxic-range theophylline, which decreased with achievement of therapeutic or subtherapeutic levels (less than 20  $\mu\text{m}/\text{ml}$ ). Linear regression analysis of the data revealed a high correlation between serum calcium concentration and theophylline levels, which follow a low dose relationship (less than 0.001). Administration of theophylline to control subjects resulted in variable response of serum calcium, but toxic levels of theophylline were not produced by the dosage employed.

**Conclusion:** Hypercalcemia may be produced by theophylline, the level of serum calcium being related to the degree of theophylline toxicity.

**Treatment of Theophylline Toxicity with Oral-Activated Charcoal.** Curtis N. Sessler, MD, Frederick L. Glauser, MD, and Kevin R. Cooper, MD, *Richmond*.

We treated 14 patients who had an initial serum theophylline concentration greater than 30  $\mu\text{m}/\text{ml}$  ( $48.3 \pm 19.4 \mu\text{m}/\text{ml}$ ) and symptoms of theophylline toxicity with oral activated charcoal (OAC); 30-gram doses of OAC were administered approximately every two hours for 2-4 doses. Ten patients tolerated OAC and demonstrated a reduction in theophylline half-life to  $5.6 \pm 2.5$  hours with resolution of symptoms. Three of these ten patients were treated in the emergency department and discharged, making hospitalization unnecessary. The four patients with the highest initial theophylline concentrations ( $76.6 \pm 17.7 \mu\text{m}/\text{ml}$ ) vomited all doses of OAC. Three of these four patients were treated with charcoal hemoperfusion, with a reduction in half-life to  $5.2 \pm 1.0$  hours. These data support the use of OAC as the primary therapeutic modality in the management of patients with theophylline toxicity, although patients with high theophylline concentrations greater than 50  $\mu\text{m}/\text{ml}$ ,

however, usually vomit the OAC and may require charcoal hemoperfusion.

**Transformation-Associated Changes in Cell Substrate Adhesion and Cytoskeletal Characteristics in a Liver Epithelial Cell Line.** M. Cottler-Fox, J. Junker, M. Wilson, E. Munoz, *Washington, DC*, and Ursula Heine, MD, *Bethesda*.

Transformed cells of both mesenchymal and epithelial origin, frequently show reduced cell substrate adhesion, decreased cell spreading, stress fiber formation and fibronectin expression in vitro. The cytoskeletal and adhesion characteristics of a liver epithelial cell line, which had undergone neoplastic transformation following exposure to DL-ethionine, were examined by immunofluorescence, morphometry, reflection contrast microscopy and electron microscopy and compared with those obtained from nontumorigenic, untreated cells of the same cell line, both at the same high passage level as ethionine-treated cells and at an early low passage level. The results indicate that the transformed liver epithelial cell line possesses adhesion and cytoskeletal characteristics different from those usually described for transformed cells in vitro, and that the observed increase in cell spreading and in actin and fibronectin expression appear to be associated with the process of transformation, rather than being a response to ethionine treatment per se. **Conclusion:** The observed changes are associated with transformation of this cell line, and ethionine accelerates the process by which the cells become tumorigenic.

**Case of Amidopyrone-Induced Agranulocytosis.** Thomas W. O'Brien, MD, *Portsmouth*.

A case of a young white male with chronic exposure to amidopyrone who developed agranulocytosis will be presented. The symptoms, hospital course, subsequent recovery and a review of the literature focusing on the history and suspected toxicity mechanisms of amidopyrone will be included. This medication is widely available internationally over the counter, thereby making it readily available to armed forces personnel and their dependents and travelers abroad.

**Life-Threatening Hyperkalemia in Severe Heart Failure.** John Frutche, MD, Simon C. Chakko, MD, and Mihai Gheorghiad, MD, *Roanoke-Salem*.

Hyperkalemia complicating congestive heart failure is an uncommon and poorly understood phenomenon. We have observed eight episodes of hyperkalemia in six patients with congestive heart

failure due to dilated cardiomyopathies. Life-threatening hyperkalemia was defined as serum potassium greater than 6.5 mmol/L. All patients were receiving digoxin, furosemide and oral potassium chloride (KCl). Neither intravenous KCl nor potassium-retaining diuretics were used. Diabetes mellitus was present in three. No patient had history of previous life-threatening hyperkalemia. Baseline renal function was normal or was consistent with mild to moderate prerenal azotemia. BUN ranged from 16 to 54 mg/dl and creatinine ranged from 1.3 to 2.1 mg/dl. In four episodes the percentage change from baseline serum potassium was  $63.1 \pm 5\%$  (range 58.7% to 71%). This occurred during acute exacerbations of congestive heart failure, although the dose of KCl and diuretics was unchanged. In four other episodes, the percentage change from baseline serum K was  $66.1 \pm 26.1\%$  (range 45.5% to 102.9%). In these episodes, additional KCl was being given to treat or prevent hypokalemia. ECG showed changes of hyperkalemia in six episodes. One death was attributable to hyperkalemia. Five patients representing seven episodes were successfully treated. Three were eventually discharged and all required KCl supplements to prevent hypokalemia. Unexpected hypokalemia occurs in congestive heart failure; its mechanism is probably multifactorial. Diabetes and elevated BUN are additional risk factors. The rise in serum potassium seemed out of proportion to changes in cardiac output, renal function, acid-base status and other identifiable changes in clinical parameters or therapy. This is a life-threatening but correctable phenomenon.

**Localized Pericardial Effusion-Constriction Presenting as Cardiac Tamponade.** H. B. Cheek, MD, Simon C. Chakko, MD, and Mihai Gheorghiadu, MD, *Roanoke-Salem*.

The pathophysiology of cardiac tamponade and pulsus paradoxus has been an area of much investigation. While it is generally agreed that cardiac tamponade represents a state of decreased ventricular filling and stroke volume resulting from compression of the heart by high intrapericardial pressure, there have been differing opinions over the relative importance of right ventricular versus left ventricular compression in tamponade and pulsus paradoxus, a frequent but not invariable feature of severe tamponade. This is a case report of a 59-year-old man with advanced esophageal carcinoma who developed a clinical picture of cardiac tamponade, including pulsus paradoxus. Physical exam was remarkable for the presence of a rapid descent of the jugular venous pulse and for pulsus para-

doxus. Noninvasive evaluation with 2-D echocardiography and CT scan revealed a localized pericardial effusion with selective compression of the right ventricle. The left ventricle was not compressed and was contracting normally. Postmortem examination revealed a greatly thickened inelastic pericardium, localized to the area adjacent to the right ventricle. These findings are consistent with a localized constrictive process. Several experiments with animals have suggested right ventricle collapse as the main mechanism of tamponade. We feel that this case report supports that theory in a human patient. To our knowledge, this is the first case report of pericardial effusion-constriction involving only the right ventricle and presenting as cardiac tamponade.

**Sub-Acute Disseminated Histoplasmosis in a Patient with Hodgkin's Disease.** Richard M. Tucker, MD, Ruth Oneson, MD, Michael J. Barber, MD, and Johnson T. Carpenter, MD, *Charlottesville*.

A 25-year-old male farmworker from the Shenandoah valley with Stage IV Hodgkin's disease post extensive radiation and chemotherapy and on chronic high dose steroids, presented with pancytopenia, fever, new adenopathy, oral ulceration and a sputum positive for AFB. Despite antitubercular and broad spectrum antibacterial coverage, the patient died. A premortem bone marrow biopsy was subsequently felt consistent with histoplasmosis. Sputum, blood and bone marrow cultures grew *Histoplasma capsulatum*. Postmortem examination showed extensive involvement of liver, lungs, kidneys, bone marrow, lymph nodes, adrenals and esophageal ulcerations with histoplasmosis. Disseminated histoplasmosis is a treatable infection that should be suspected in febrile patients from endemic areas with altered cell-mediated immunity. As in this patient, steroids may contribute to dissemination and the infection may be confused with progression of neoplastic disease or of another coexisting infection. Cultures of this slow-growing organism cannot be relied on for acute diagnosis. Where appropriate, *H capsulatum* should be aggressively searched for in stained specimens from bone marrow buffy coat, lymph node biopsy, and scrapings of oral and gastro-intestinal ulcerations. We present a patient with advanced lymphoma from an endemic area with possible occupational exposure to *H capsulatum* in whom such a search would have been of great benefit.

**The Insidious Nature of Staphylococcal Septic Arthritis in Patients with Rheumatoid Disease and Its Associ-**

**ation with Staphylococcal Nasal Carriage.** Randolph G. Reins, MD, and Charles J. Schleupner, MD, Roanoke.

Pyarthrosis in the setting of rheumatoid arthritis is a well-recognized complication. Many investigators have reported a predominance of mono- or oligo-articular involvement associated with advanced age and prolonged (five years) duration of rheumatoid disease. The syndromes have been characterized by insidious onset, subdued clinical signs (often exacerbated by steroid therapy) and a protracted course. *Staphylococcus aureus* has been etiologically involved in 80% of the cases.

We report five patients (mean age 59 years, one female) with severe rheumatoid arthritis and polyarticular staphylococcal septic arthritis. Three of five have joint prosthesis. The clinical course of each patient reflected the insidious onset of this syn-

drome, often interpreted as reactivation of rheumatoid disease and recognized late in its evolution. Each case demonstrated the protracted recovery from this syndrome after initiation of therapy, often complicated by late recognition of multiple metastatic soft tissue foci. The source of the *Staphylococcus* in each case was occult. However, cultures of the anterior nares performed in four cases were positive for *S aureus* with antibiograms of three of four being identical to those of blood and/or joint isolates. The importance of staphylococcal nasal carriage has been previously emphasized for dialysis patients. Our findings suggest that nasal carriage of this organism may also be important in pathogenesis of the serious infectious complications seen in rheumatoid patients. This finding may also have implications in management of rheumatoid arthritis, especially for those receiving prosthetic joints. ■

## Can You Diagnose This?

Answer to puzzle on page 111.

### DIAGNOSIS

Sinus tachycardia, premature atrial contraction, and acute pericarditis

### DISCUSSION

The electrocardiogram has ST segment elevation in leads II, III, aVF, V<sub>2</sub> and V<sub>4</sub>-V<sub>6</sub>. Diffuse ST segment elevation, particularly in leads I, II, and III, is the most characteristic finding in acute pericarditis. There is also PR segment depression in leads I, II, III, aVF, and V<sub>3</sub>-V<sub>6</sub>, and PR segment elevation in lead aVR.

PR segment depression in many of the twelve leads, with PR segment elevation in aVR, is characteristic of pericarditis, in contrast to the changes occasionally seen in atrial infarction of PR segment elevation with reciprocal depression.

In acute pericarditis, the ST-T wave changes are present in almost all leads and undergo a characteristic evolution. Initially, the ST segment is elevated, followed by a gradual return of the ST segment to the isoelectric line and concurrent decrease in the amplitude of the T wave. Then T wave inversion occurs, followed by resolution of the T wave changes and return to the normal pattern. The ST segment and T wave changes are most commonly

seen in leads I, II, and V<sub>5</sub>, V<sub>6</sub>. The incidence of ST segment and T wave changes is markedly higher in patients with acute pericarditis than with chronic effusive pericarditis.

The ST segment and T wave changes in acute pericarditis must be separated from those of acute myocardial infarction and also from the normal variant of early repolarization. In patients with acute myocardial infarction, reciprocal ST segment depression is often present, but it is usually absent in pericarditis with the possible exception of lead aVR. In pericarditis, the T wave usually continues to be positive until the ST segment returns to the isoelectric line, whereas in myocardial infarction the T wave will often begin to invert while the ST segment remains elevated. In acute myocardial infarction, the height of ST segment elevation may exceed 4-5 millimeters, but this degree of elevation is unusual in patients with acute pericarditis. In subjects with the normal variant of early repolarization, the ST segment is usually concave upwards with a scooped appearance.

The patient whose electrocardiogram is presented had a friction rub at the time of admission. The expressive aphasia resolved the day after admission, but during the next few days she developed increasing dyspnea secondary to pericardial effusion. On the fourth day after admission she developed cardiac tamponade requiring a pericardial window drainage procedure. Cultures of fluid and pericardial tissue were negative for tuberculosis and fungus, and the pericarditis was probably secondary to rheumatoid arthritis.

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# Somatopsychic Aspects of Medicated Addison's Disease: Case Report

Robert P. Archer, PhD,  
J. W. Wooldridge, BS, and  
David W. Reid, MD,  
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**P**RIMARY adrenal cortical insufficiency (PACI), or Addison's disease, is an endocrinological problem which is rare in the general population (one case per 100,000 population) and especially infrequent in children. Overt manifestations of this disease are asthenia, weight loss, anorexia, nausea, vomiting, abdominal pain, hypotension and hyperpigmentation. Symptoms occur due to failure of the adrenal cortex to secrete sufficient quantities of several hormones, especially aldosterone and cortisol. The preferred treatment for this disorder consists of chronic steroid therapy.

Psychological aspects associated with Addison's disease were first noted in 1942 in a report of 16 cases of psychiatric disorders among 25 individuals diagnosed over a ten-year period.<sup>1,2</sup> This somatopsychic relationship was also described by Stoll in 1953 and manifestations were divided into three classes.<sup>3</sup> The first group was associated with acute and untreated PACI and characterized by delirium. The last two symptom groups were associated with chronic PACI and characterized by "chronic mood anomalies and periodic disturbances in temper, activity, and general drive" which did not parallel any physical findings.

Since publication of these observations, several researchers have related incidents of apathy, negativism, irritability and depression.<sup>4-7</sup> For example, Endo et al recently reported evidence of anxiety and depressive symptomatology in a patient with PACI which responded positively to glucocorticoid replacement therapy.<sup>8</sup> Other investigators, however, have rejected any psychological findings as

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directly related to PACI.<sup>9</sup> The degree to which psychological symptoms may be reliably related to PACI, therefore, is currently unclear and empirical research on these phenomena has been sparse due to the low incidence of this disorder.

There is also little research data regarding the psychological effects of medical management (chronic steroid therapy) of PACI. Cleghorn, in a 1953 editorial, called for further clinical research in this area.<sup>1</sup> He noted that existing literature suggested that mental excitement and even psychosis may be associated with early steroid therapy in PACI, but these symptoms subsided with time and continued steroid treatment. A case study suggesting that chronic cortisone treatment of PACI resulted in "cortisone-induced aggression, sexuality, and lability" was reported in 1954.<sup>5</sup> Furthermore, several authors have suspected that the incidence of psychological changes due to chronic steroid treatment are probably much higher than the literature would seem to indicate.<sup>7</sup>

The suspicion of potential psychological manifestations of PACI and chronic steroid therapy appears justified, especially when this symptomatology is related to basic research findings on effects of glucocorticoids on neural tissue. For example, significantly decreased levels of circulating glucocorticoids are directly related to increased conduction velocity along the axon in neural transmission and depolarization of the axonal membrane at a lower threshold.<sup>10,11</sup> These findings are consistent with other research showing that decreased glucocorticoids in rat brains increases neural excitability as measured by the incidence of seizures following electroshock administration.<sup>12</sup> This increase in axonal transmission velocity and stimuli sensitivity results in an increased detection sensitivity, of up to a 100-fold difference.<sup>13</sup> Increased detection sensitivity due to a glucocorticoid depletion has been observed in the sensory modalities of taste, audition and olfaction, which may be reversed to normal limits within 24 to 36 hours with the administration of glucocorticoid.<sup>14</sup>

Increased perceptual sensitivity, due to increased transmission velocity and neuronal excitability ultimately results in an "assault" on the nervous system by sensory stimuli which could result in perceptual impairment and defective informational processing associated with mental confusion. This sensory stimuli "overload" would normally have been rejected by selective inhibition had adequate amounts of glucocorticoids been present in the neurons.<sup>10</sup> Indeed, researchers have observed that increases in detection sensitivity are associated

with a decrease in perceptual discrimination.<sup>4,10</sup> It seems reasonable to conclude that the macroscopic effects of a relative glucocorticoid deficiency in limbic neuronal tissue could result in an endogenous emotional lability. Finally, it has been noted that individuals who demonstrated these altered detection sensitivities and perceptual impairments, were not aware that perceptual changes had taken place.<sup>9</sup>

The following case history suggests a potential interaction between PACI, chronic steroid therapy and psychological/psychiatric functioning.

### Case Report

The patient, a 13-year-old white male, presented with a four-year history of PACI. Following episodes of physical aggression and emotional outbursts toward parents and younger sister, the patient was clinically evaluated by a psychologist. Appreciating the complexity of the patient's medical condition, the referring psychologist felt an exclusive diagnosis of primary functional disorder would be premature; thus the patient was referred for inpatient evaluation to rule out side effects of cortisone therapy, neurological disorders, and adjustment reactions of a psychiatric nature. He was admitted to a psychiatric evaluation and treatment unit within a psychiatric teaching hospital. Within 60 days prior to his psychiatric hospitalization the patient had engaged in two arguments with family members, during which he seized a pair of scissors and threatened to attack his stepfather and his mother. The patient reported an increased frequency of agitation and rapid mood changes over the past six months. The patient's pediatrician related a history of marginal compliance with replacement steroid therapy for the past several months. Specifically, the patient and his mother would argue over who was responsible for medication administration, resulting in occasional intervals of non-administration followed by episodes of over-medication to make up for the non-administered dosage. The patient manifested depression but denied thought disorganization or the presence of hallucinations at psychiatric admission.

The family was of middle-class socioeconomic status and consisted of the patient, his mother, stepfather and 12-year-old sister. The patient was a planned full-term child with an uncomplicated delivery. The childhood history contained several significant medical events with episodes of bronchial bronchitis, sleep walking and toilet training difficulties in addition to the development of Addison's disease. There was no psychiatric treatment history

prior to the inpatient admission described in this report. The patient's mother had two prior marriages; the patient's current step-father adopted him at age 6½. Following the patient's admission to treatment, family therapy was conducted to facilitate the open expression of feelings and to aid the family in dealing with the patient's medical and behavioral problems. The family therapists' report of these sessions indicated an enmeshed family unit which exhibited restricted capacity to express feelings or tolerate deviant behavior.

At the time of evaluation on the inpatient unit, the patient was receiving hydroxycortisone (Cortef®), 15 mgs po bid. While the patient's physician had consistently emphasized the importance of medication compliance for several weeks immediately prior to inpatient admission, the degree of patient compliance can only be estimated.

Physical exam revealed a 13-year-old white male, 58 inches in height, 104 pounds, temperature of 98.4°, with a pulse of 80, and a blood pressure of 102/68. The remainder of the physical exam was within normal limits; chemistries, including glucose, white blood count and serum chloride, potassium and sodium levels were unremarkable. An EEG, occupational therapy assessment and audiometric screen were within normal limits. However, the Fisher-Logemann Test of Articulation Competence revealed mild auditory distortion; this is of interest, given the basic research findings regarding perceptual distortion in glucocorticoid deficiency. The results of a mental status exam produced no evidence of thought disorganization or psychotic confusion. The patient was well oriented in relation to place, person and time. Memory functioning appeared to be intact with no evidence of deficits in concentration or attention. Concrete thinking was demonstrated on proverbs at a level inconsistent with the patient's high-average intellectual functioning. Affect during the mental status exam appeared depressed.

The patient was administered a comprehensive psychological battery, including projective and objective personality assessments, and was found to be of high average intelligence with no signs or symptoms of psychotic disorientation or neurological dysfunction. The patient did manifest clinical levels of depression and underlying feelings of hostility and anger, which he attempted to deal with by utilizing rigid defense mechanisms based on denial and repression. When these defense mechanisms failed, the patient was subject to brief episodes of aggressive acting out, following which he would attempt to "disown" this behavior by dis-

associating himself from the aggressive actions.

Overall, the results of objective psychological assessment, including the Minnesota Multiphasic Personality Inventory, indicated the presence of psychopathology within clinical limits in the areas of social isolation, depression, somatic concerns and difficulty in appropriately identifying and expressing feeling states. The personality functioning described from test data were consistent with the behaviors of this patient as reviewed by treatment staff.

At no time during the patient's eight weeks of psychiatric inpatient evaluation and treatment were incidents of serious aggressive outbursts observed. It was clear, however, that the patient maintained a phobic-like fear of his expression of aggressive behaviors. The psychosocial stressing events related to the development of this personality style appeared to include substantial family dysfunction combined with the adaptive challenge presented to the patient by Addison's disease. The purpose of this paper is related to the additional possibility that the psychological disorder displayed by this patient may be related to Addison's disease and the use of cortisone replacement therapy to treat this organic disorder. Specifically, it might be noted that this patient's perceptions that his feeling states or moods fluctuated widely and in a manner that he could not control is largely consistent with the literature on the psychological implications of Addison's disease and its treatment.

It is not suggested that this patient's psychological problems are entirely or even largely the result of his physiological disorder; rather, the major point is that this patient's psychological disorder may be seen as potentially interactive with his physiological disorder to the extent that careful consideration of both physiological and psychological factors in treating children with PACI is warranted. It is not possible to specify the degree to which the presence of PACI or marginal medication compliance with cortisone replacement therapy might have led to additional emotional lability and aggressive outbursts in this case. It would appear, however, that thoughtful review of this clinical material would suggest that these factors may have had an interactive role in the development of substantial psychological difficulties for this child. Thus, in this case a treatment recommendation of individual and family psychotherapy was coupled with special attention given to the importance of careful medication compliance and monitoring. Strategies for removing the issue of medication compliance from the area of child-maternal conflict were developed.

Until such time as more basic research is accomplished, it would appear prudent for medical and psychiatric personnel to consider carefully both physiological and psychiatric factors in the diagnosis and treatment of individuals with Addison's disease.

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# VIRGINIA MEDICAL

## EDITORIAL

### “Where’s Kinloch?”

THEY, the ubiquitous they, say that he, the Dr. Kinloch Nelson he, is going to do it again, retire that is, and this is absolutely, finally, and irrevocably his last retirement. To recognize such an historic event this tribute is now paid to him, the truly unique individual who has been a mover and a shaker on the Virginia medical scene, and on the regional and national scenes as well, for more years than can be counted on your fingers and toes and his, too.

Almost a quarter of a century ago, at the Medical College of Virginia, I was asked to write about this same remarkable individual. Because Dr. Nelson devoted so much of himself to MCV and served it for the major part of his professional life, 1929 to 1971, and because the characterizations of that date are as pertinent now as then, reproducing part of it seems appropriate.<sup>1</sup>

*A sauntering step amid a cluster of students, a quizzical friendly mien, a twinkling eye, a rasping greeting, “Hey Doc”—these are the hallmarks of Dr. Kinloch Nelson, professor of medicine, director of the department of continuing education, director of the medical outpatient clinic, director of the home care program, chairman of the intern committee, and major-domo extraordinary; one of the most popular members of the faculty, who has much to do with the molding of the student in the*

*clinical years, and who, by virtue of his constructive thinking, tact, sympathetic understanding, and genius for inspiring friendships and loyalties, is assigned tasks and called on for advice and assistance by the highest and lowest at the school regarding problems ranging from the most personal to the most scientific.*

*His relationship to the students and housestaff is characterized by a strong personal interest in them and a readiness to work with and for them. His relationship to the school has been characterized by a deep and unswerving loyalty. This is not an unquestioning one, however, as can be attested by anyone who has sat with him on any of the many committees of which he is a member. In meetings he has a unique facility for influencing, often decisively, the thinking and action of the group by making a few brief but pertinent, pungent, often humorous remarks and observations.*

*When alumni gather, Kinloch Nelson is the subject of reminiscences; when one is traveling from the school, there is little wonder that the frequent question affectionately put is, “How is Kinloch?” On campus, there is a warm response, a lighter step, a brighter smile in response to that greeting, “Hey, Doc!”*

Kinloch Nelson has been here, there, everywhere—at the Medical College of Virginia, the VA

Hospital, Medical Society of Virginia headquarters, at seminars, meetings, gatherings all around the state. Throughout his long and fruitful career he has been a true peripatetic. Now, with no specific job to locate him firmly, the question put will be, "Where's Kinloch?"

**D**R. Nelson's career has been marked by a succession of outstanding accomplishments. He is a master of the American College of Physicians. The School of Medicine of the Medical College of Virginia flourished during his tenure as dean. He saw it safely through a dynamic period of building, growth and change, including the creation of Virginia Commonwealth University, of which the Medical College of Virginia is the Health Sciences Division, and the establishment of the Kinloch Nelson Clinic, the private practice facility for the clinical faculty.

In 1971, Dr. Nelson retired from MCV. Rather than submit to a life of indolence, he moved across the James River to the McGuire VA Hospital. Here his knowledge and experience were put to good use and, as associate chief of staff for education, he filled an important slot and rendered outstanding service.

Retirement time came around again and once more Nelson denied its siren calls. Instead, he turned resolutely westward to The Medical Society of Virginia headquarters in Windsor Farms. In 1978 he began a new job, Coordinator of Continuing Medical Education, for our Society. Here he has literally brought order out of chaos, developed a program that affords CME opportunities throughout the state, and instituted a system for certification and recognition of those doctors who are faithful in their determination to keep up with today's explosion of medical knowledge. He has done this forcefully but with good humor. His special gift for eliciting cooperation and support coupled with his intimate knowledge of situations in communities and hospitals and his statewide host of friends ensures the continuing success of CME in Virginia.

And now, having successfully met another challenge and completed another job, Dr. Nelson seems ready to call it quits.

**T**HE true character of the man, Kinloch Nelson, cannot be delineated by a listing of impressive accomplishments and honors. The multitude of anecdotes and tall stories, some true, some apocryphal, that are told of him testify to this. Many doctors across the state and elsewhere, too, have their favorites. Here are several of mine.

In the spring of 1936 as I came out of McGuire



KINLOCH NELSON, MD

Hall I saw a sporty roadster with its top down apparently abandoned, just left at the intersection of 12th and Clay Streets, not quite blocking either, but with no pretense of being parked. Noting my astonishment, a friend said, "Oh, that's Kinloch Nelson's car. He always leaves it like that. He'll be back in a little while." Later that spring, I had the fabulous experience of going to his beloved City Home where he was preceptor for physical diagnosis. I'll never forget it, the insight, the compassion, the understanding, the knowledge, the technical skills, the ability to communicate.

Here's another. The banquet which was the highlight of the annual regional meeting of the American College of Physicians was coming to a close. Our speaker, who had waxed a bit too long on his particular interest, brucellosis, but had spoken well, was the internationally known authority, Dr. Wesley William Spink. Then Dr. Nelson presiding, for he was the ACP Governor for Virginia, dismissed us with these immortal words, "Spink has spoke." The meeting literally broke up.

Kinloch in his inimitable way and with that look in his eye named these as his major accomplishments: "First, I got married to Alice" (Deford); and, indeed, that was an accomplishment, for she more than holds her own with him, a testimonial to

her charm and accomplishments. "Second, I got out of debt"—around 1934, he thinks, and certainly when the Great Depression was still quite great. "Third, I passed the Boards" (of Internal Medicine in 1947) "and repassed them" (in 1974)—the latter something that many of us never attempted. "Fourth, I got over TB"—which he developed in Italy during WWII." And fifth, "I made six holes-in-one."<sup>2</sup>

**G**OSH, Kinloch, we sure are going to miss you at The Medical Society of Virginia and at the medical goings-on around the State—and tell us, what about your own CME now? Nevertheless, we

know that you will visit around, continue your lifelong interest in medical affairs, and probably have the busiest retirement in history.

There'll be no goodbyes, for none of us is going anywhere. Hey, Kinloch! Now that you are a gentleman of leisure, how about a game of golf in the morning. All right, if it's raining, we'll make it gin.

W. T. THOMPSON, JR., MD

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1. Thompson WT Jr. The man of the hour. *The Scarab* 1961;10:8,24,26
2. Who's Who. *Va Med* 1983;110:678

## Boxing: The Intent Is Wrong

**T**HE current interest in the problem of boxing needs to be considered from various viewpoints. From the scientific situation, it is not possible for the neurological community to condone a "sport" in which the defined intent is to injure the nervous system of your opponent. Repeated blows to the head do produce changes that can be measured by present criteria, i.e., EEG, psychological testing, blood levels of brain creatine kinase BB enzymes, and CT scans<sup>1</sup>. All of these changes occur after repeated blows. There are no available examinations or tests to prevent these changes. Helmets would not completely protect the brain cells or neck structures from intentional injury. Helmets may only decrease the velocity of the blows. Ruptured blood vessels, contusion of the cerebrum or brain stem, or fractured vertebrae can neither be predicted nor prevented. A ringside physician surely may see an injury developing and thus prevent further injury but he cannot prevent an injury from occurring. The latter may be the serious one.

There have been suggestions made recently to limit the blows to the head, to increase the padding of the gloves and to change their shape, and to limit the length of the rounds, etc. These modifications do not prevent a serious or even fatal single blow with the intent to injure.

Previously, the National Collegiate Athletic Association approved of boxing. Intercollegiate boxing had its beginning in Charlottesville in 1922. Over the years the University of Virginia enjoyed the prominence of recognition through its championship boxing teams. One of the last of these teams—indeed, the Eastern Intercollegiate Championship

Team of 1948—is pictured in Dabney's *Mr. Jefferson's University*.<sup>2</sup> I knew most of these boxers personally. There were periodic suggestions that "frequent blows to the head might cause permanent brain injury."<sup>2</sup> A VMI cadet died in 1937 from a broken neck in a match with Maryland.<sup>2</sup> A helmet would have not made the difference. Finally, in 1955 the board of visitors withdrew the University of Virginia from intercollegiate competition.

Boxing is defined as "a sport in which two fighters battle each other with their fists . . . The boxers throw powerful punches as each tries to win the bouts on points, render his opponent unconscious, or force him to give up the fight."<sup>3</sup> A knockout is a concussion at least and possibly a contusion with measurable brain injury. In boxing when you do this by intent you win; in all other contests when intent is recognized you are penalized. There is the difference. Other sports have injury but not injury condoned by the judges.

Recently an article on boxing called for a ban on boxing.<sup>1</sup> It argued that boxing does not appear to satisfy the definition of a sport and offers the potential for intentional injury.

The executive board and the membership of the American Academy of Neurology and the membership of the American Neurological Association, the two leading neurological organizations in the country, called for a ban on boxing. This was taken to the American Medical Association's House of Delegates meeting in December. Two state delegations (California and New York) and the District of Columbia as well as the Academy of Pediatrics also brought resolutions on boxing to the AMA meeting.

These were collected together and the following Substitute Resolution 26 was adopted:

**RESOLVED**, that the American Medical Association: 1) encourage the elimination of both amateur and professional boxing, a sport in which the primary objective is to inflict injury; 2) communicate its opposition to boxing to appropriate regulating bodies; 3) assist state medical societies to work with their state legislatures to enact laws to eliminate boxing in their jurisdiction; and 4) educate the American public, especially children and young adults, about the dangerous effects of boxing on the health of participants.<sup>4</sup>

This resolution makes sense! It is an issue in which doctors belong.

There has been considerable media coverage recently of this point of view. I have heard almost complete support from other physicians, patients, the public, orderlies, nurses, neighbors, strangers, and the majority of the sports writers that have requested interviews. Most of the opposite views have been heard indirectly. Only one has communicated directly and that was to invite me to a fight. It appears that those that support it are those "in the business." To say that this is the only way some can get out of the ghetto is rationalization, and to say there is no evidence of injury is incorrect.

The concept that doctors should not be interesting themselves with the protection of others is incorrect. There have been statements made that we should not deny individuals the right to beat each others' brains out intentionally in a recognized fashion of a "sport." There are many boxers who never make it to the top and multiple sparring partners who are apparently sacrificed in the practice ring for the benefit of the few. The advice of the fight promoters that this is necessary does not make decent, common sense in a civilized society. Dueling with other weapons (pistols, sabres, swords) is no longer accepted. How can one argue that boxing and potential death or serious injury from a fist fight is any different?

Some of the arguments for boxing as a "civil right" or as a "social staircase for entering the mainstream of society" are moral issues. The trainer who helps the underprivileged youngster learn how to fight and advises against the risk to the boxer or his opponent may be self-indulging another person. It is for that reason doctors need to advise that intent to injure should *not* be condoned. Is it correct or is it child abuse to expose our youth to the false assumption that they cannot be seriously injured themselves or inflict injury to their oppo-

nent? Adults do have a responsibility whether they are parents, physicians or promoters. Who profited from the entertainment of gladiators of Rome?

Boxing, with intent to injure, is not an appropriate sport. The evidence is available that injury does occur from repeated blows to the head. This injury may not be reversible and may be fatal. The public should be made aware of the intentionally dangerous effects of boxing.

NELSON G. RICHARDS, MD

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1. Richards N. Ban boxing. *Neurol* 1984;34:1485-1486
2. Dabney V. Mr. Jefferson's University, A History. 1981, University Press of Virginia, pp 203, 202, 233
3. Adapted from Boxing (Sullivan G) in *The World Book Encyclopedia*, © 1984 World Book, Inc., pp 436-443

## Thank You

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# VIRGINIA MEDICAL OBITUARY

## **Helen H. Wechsler, MD**

Dr. Helen M. Hackman Wechsler, Fairfax physician honored for her contributions to public health, died December 11, 1984, at Manor Care Nursing Home, Arlington, where she was under treatment for multiple sclerosis. She was 57.

From 1971 to 1978 Dr. Wechsler served as director of Arlington County's Department of Human Resources, in which post she helped create several innovative programs, notably an award-winning day care program for the elderly. She was named a 1977 Washingtonian of the Year by Washingtonian magazine, and in 1978 the Arlington County Medical Society conferred on her its Welburn Award for distinguished service.

Born in London, Dr. Wechsler earned her undergraduate and medical degrees at Trinity College, Dublin. She came to this country in 1952 and entered Johns Hopkins University, where she earned a master's degree in public health. After a stint as a civilian physician with the US Army, she moved to the Washington area, working first for the Fairfax County Health Department before becoming an assistant health director in Arlington.

Dr. Wechsler was a past president of the Virginia Association of Local Health Directors and during the 1970s was an associate clinical professor at Georgetown University. She spent 1976 in England as a World Health Organization fellow, studying the problems of aging.

## **James F. Waddill, MD**

Dr. James Franklin Waddill, long an internist in Newport News, died November 19, 1984, in a Newport News hospital. He was 79 and had retired from practice in 1972.

A native of Norfolk, Dr. Waddill earned his medical degree in 1932 from the University of Pennsylvania and stayed on in Pennsylvania for his training. He served during World War II with the Army medical corps, reaching the rank of colonel, and was cited for meritorious service.

Dr. Waddill had been president of the Norfolk County Medical Society and the medical staff of Norfolk General Hospital. His memberships in the Newport News Medical Society and The Medical

Society of Virginia spanned almost 50 years, and he was a member also of the American College of Physicians, the American College of Chest Physicians and the American Society of Internal Medicine.

## **Harold I. Nemuth, MD**

Dr. Harold Isaac Nemuth, a leader in organized medicine and medical education in Virginia, died December 8, 1984, at the Medical College of Virginia Hospitals. He was 72 years old and had practiced medicine in Richmond for nearly 40 years.

Clinical professor of preventive medicine at the Medical College of Virginia, Dr. Nemuth had served as director of MCV's home care program. In 1978 he was appointed to the board of visitors of Virginia Commonwealth University and was later vice rector. He also had served on the Governor's Council on Drug Abuse and Council on Aging and from 1948 to 1966 was city police physician.

Dr. Nemuth received his undergraduate degree in 1934 from Columbia University and his medical degree in 1939 from the Medical College of Virginia. He interned at Knickerbocker and Bellevue hospitals in New York and trained in Richmond at Sheltering Arms and St. Elizabeth's hospitals. During World War II he served with the Navy as a medical officer in the Atlantic and South Pacific combat zones, reaching the rank of commander.

He had been vice president of both The Medical Society of Virginia and the Richmond Academy of Medicine and was a fellow of the Royal Society of Medicine. His many other professional memberships included the Industrial Medical Association, the American Geriatrics Society, and the Association of Teachers of Preventive Medicine.

## **Walter E. Vermilya, MD**

Dr. Walter E. Vermilya, long-time physician and medical examiner in Clifton Forge, died November 7, 1984, in Alleghany Regional Hospital. He was 72 years old.

Born in Greenville, New York, Dr. Vermilya moved with his family to Clifton Forge as a boy. He was educated at Washington and Lee University and received his doctorate in medicine at the Medi-

cal College of Virginia. After training at Rex Hospital in Raleigh, North Carolina, he established his family practice in Clifton Forge. He served in the US Army Medical Corps during World War II, retiring as a lieutenant colonel.

Vigorously supportive of church and professional organizations, Dr. Vermilya had been an elder and trustee of the Clifton Forge Presbyterian Church and belonged to many fraternal organizations in the community. As a youth he was Clifton Forge's first Eagle Scout, and he continued to work in scouting as an adult. He had been president of the Emmett Memorial Hospital staff and had long been a member of the Alleghany-Bath Medical Society, The Medical Society of Virginia, and the Virginia Academy of Family Practice.

## Memoir of D. W. Boyer 1920-1984

*By William S. Ogden*

The Danville-Pittsylvania Academy of Medicine recognizes Don Boyer, who died on April 18, 1984, as an outstanding physician, loved and respected by both his patients and fellow physicians. He demonstrated the highest qualities of his calling with a pleasant disposition and a rich fund of knowledge that was used in teaching residents from Duke and instructing his patients and fellow orthopedists in complicated problems of children and adult orthopedics.

He was born on October 1, 1920, in Chicago, and was a graduate of George Washington University. He later studied at Johns Hopkins University and George Washington Medical Schools, and he served his residency at Duke University Hospital. He came to Danville to be associated with Dr. Robert Musgrave beginning in 1959. Since that time he has served as a clinical professor at Duke University Hospital and as a member of the American College of Surgeons, the American Academy of Orthopedic Surgeons and the Piedmont Orthopedic Society. Prior to going into orthopedic surgery, he had served as a general practitioner in Norfolk.

Over the many years of practice in Danville, he made significant contributions to the medical staff of Danville Memorial Hospital, as an active committeeman, as President of the Medical Staff and as President of the Pittsylvania County Academy of Medicine. He will long be remembered as a good and faithful worker. His experience in medicine was rich but even richer was the experience as a man,

having served as a World War II pilot and being highly decorated.

He was a man's man with many and varied interests ranging from the breeding and raising of horses to boat racing to the recent invention to which he had devoted so much of his time.

He is survived by his wife, three sons and six daughters. He will be missed greatly, by all of us.

## L. Ray O'Brian, Jr., MD

Dr. Leland Ray O'Brian, Jr., a past president of the Lynchburg Academy of Medicine, died December 19, 1984, at his home in Lynchburg. He was 72 and had practiced surgery in the Lynchburg area for 43 years.

Born in Durham, North Carolina, Dr. O'Brian was graduated from Wake Forest University and the University of Pennsylvania Medical School and served for two years with the US Navy during World War II. He had been president of the Lynchburg Lions Club and chief of staff of Lynchburg General Hospital.

His membership in The Medical Society of Virginia spanned 40 years, and he belonged also to the Southeastern Surgical Congress and the American College of Surgeons.

## Dianne L. Eklund, MD

Dr. Dianne Lynn Eklund, Charlottesville, died October 8, 1984, at the age of 31. Dr. Eklund was graduated from the University of North Carolina at Chapel Hill in 1975 and continued there for her doctorate of medicine and her internship and residency in psychiatry. She also completed a fellowship in child psychology at the University of Virginia School of Medicine.

## Memoir of J. S. Morris, Jr. 1917-1984

*By Robert A. Milanovich, MD*

Dr. John Sargent Morris, Jr., for 34 years a pediatrician in Lynchburg, died March 29, 1984, in Virginia Baptist Hospital after a long illness. He was 66 years old.

A Lynchburg native, Dr. Morris earned his medical degree in 1943 at the Medical College of Virginia. He received his pediatric training at the Medical College of Virginia Hospital and at Johns Hopkins

University Hospital. In 1948, after serving two years in the United States Army Medical Corps, he established a practice of pediatrics in Lynchburg and maintained it until retiring in 1982 due to ill health.

Dr. Morris, with the support of his wife Elizabeth Cobey Morris, practiced in an office located in his home, where he was available day or night to help sick children and their worried parents. His dedication to serve his patients and welcome them into his home set high standards for all the physicians who have followed him into practice in Lynchburg.

Not only was Dr. Morris interested in providing good medical care to Lynchburg's children, he also helped provide quality schooling as a member of the Lynchburg School Board for 14 years. He recognized that children need exposure to books, and he made sure these were available as a member and former chairman of the Lynchburg Public Library Advisory Board.

Although Dr. Morris cared about all his patients, he especially wanted to help those children who were handicapped. He was a board member of the March of Dimes for 23 years and was largely responsible for bringing a genetics clinic to Lynchburg.

Despite a busy solo practice and raising four children, Dr. Morris found time to pursue his avid interest in the Civil War, especially how Lynchburg was involved in the conflict. He was an expert on this subject and was a charter member and served as past treasurer of the Lynchburg Civil War Round Table. He wanted Lynchburg's citizens to remember Lynchburg's history and was organizer and president of the Corporation to Restore Fort Early. In recent years members of the Lynchburg Academy of Medicine were treated to a delightful presentation by Dr. Morris on medical practices during the Civil War. He was especially proud that many of Lynchburg's citizens voluntarily manned a Confederate hospital which saved many lives.

The impact Dr. John S. Morris, Jr., has had on the lives of three generations of Lynchburg children will stand as a memorial to his lifelong efforts. I believe nothing would have pleased him more.

## Memoir of H. B. Stone, Jr. 1909-1984

*By Alexander McCausland, MD,  
C. T. Burton, MD, J. E. Gardner, MD,  
and Conrad Stone, MD*

Dr. Harry B. Stone, Jr. died May 22, 1984. Dr. Stone was born in Ashland, West Virginia, the son of Harry Benjamin Stone and Mary Lu Kearfott Stone. Harry B.'s father, Harry B., Sr., was a pioneer EENT specialist in Roanoke.

Harry B. was a member of the First Baptist Church, where he served as chairman of the board of deacons. He graduated from Hampden-Sydney College and Phi Beta Kappa at the University of Virginia School of Medicine. After graduation he trained in his specialty, EENT, at the Eye, Ear, Nose and Throat Infirmary in New York City. He began practice in Roanoke with his father in 1937, and retired in October, 1983. He served in the U.S. Navy as a reserve medical officer during World War II. He was a past president of the Roanoke Academy of Medicine and the Virginia Society of Ophthalmology and Otolaryngology. He was a member and Paul Harris fellow of the Rotary Club of Roanoke. He was a member of the Shenandoah Club and the Roanoke Roundtable. He is survived by his wife, Margaret Venable Stone; three sons, Dr. Harry Benjamin Stone III, otolaryngologist, New Bern, North Carolina, Dr. Charles Venable Stone, a teacher in a private boy's school in New York City, and Dr. Kearfott Stone, ophthalmologist, Gloucester, Virginia; a brother, Dr. Conrad Stone, retired ophthalmologist, Roanoke, Virginia; three sisters, Mary Glen Copenhaver, Roanoke; Rebecca Bishop, St. Petersburg, Florida; Nancy Watkins, Winston-Salem; and eight grandchildren.

Harry B. will be remembered not only for his fine intellect and dedication to his profession and specialty and his many contributions to our profession, but also for his fine sense of humor, his warm personality, and the fortitude with which he accepted his final illness. When the diagnosis of his last illness was known to Harry B., he accepted it with finality. His enduring courage was an inspiration to those of us who were his physicians. We, his colleagues, remember him as a man who was a delightful friend and companion. Harry B.'s devotion to his family, friends and profession will forever be stamped indelibly in the memory of those of us who were privileged to know him. Medicine has lost a great physician from its ranks. This community has lost a faithful servant from its midst.

# Memoir of Benedict Nagler 1900-1983

By Lucy H. Gibbs, MD  
Jacques E. Botton, MD, and  
Harold L. Riley III, MD

The Lynchburg Academy of Medicine lost a dear friend and colleague, Benedict Nagler, on December 16, 1983.

Benedict Nagler was born in Czernowitz, Austria, in 1900, and moved with his family to Hamburg, Germany, in 1906. He studied medicine in Wurzburg, Munich and Hamburg, receiving his MD degree in 1925. He then studied neurology and psychiatry in Hamburg and Berlin, where he completed his residency. In 1927 he married the late Dr. Hilde Laub and practiced medicine in Berlin from 1931 to 1933. For political reasons he and his family then emigrated, first to France, then Tunisia, and finally to the United States. Fluent in English, he established a practice in neurology and psychiatry in Newark, New Jersey, in 1935. After he became a naturalized citizen, he volunteered for military service and served as chief of neurology and psychiatry at Cushing General Hospital in Framingham, Massachusetts. After he left the Army in 1946, he served as chief of psychiatry and neurology at McGuire Veterans Hospital in Richmond for seven years and as chief of the neurology division for the Veterans Administration in Washington DC for four years. During this time he also taught at the Medical College of Virginia and Georgetown School of Medicine.

In 1957 he accepted the appointment as director of Lynchburg Training School and Hospital, a position he held until 1973, and it was in this role that we came to know him. Although he had already attained prominence professionally and was widely published, he chose to use his remarkable talents to serve the mentally retarded at the large, understaffed, overcrowded, underfunded Lynchburg Training School, with which he was familiar because of his work on a review of the Virginia mental health system. Ben's impact was dramatic: he was instrumental in getting many research and hospital improvement grants; he regularly brought in distinguished speakers in all fields of mental retardation and neurology; and he was amazingly effective in persuading the General Assembly to provide more funds for the mentally retarded. Although he was proud of the increased "professionalism" of the staff and the improved quality of care, he modestly credited his "co-workers" for the improvements.

Prominent in his field, personally charming and multi-lingual, Ben was always in demand as a lecturer, and he and Hilde traveled all over the world. He was a clinical instructor in neurology at the University of Virginia School of Medicine from 1957 to 1967; served as a consultant to the National Institute of Neurological Diseases and Stroke; was president of the American Academy of Mental Retardation; chaired the committee on Problems of Mental Retardation of the American Academy of Neurology and the Mental Retardation Committee of the Virginia Neuropsychiatric Society; and served on the editorial boards of *Clinical Electroencephalography* and the *American Journal on Mental Deficiency*. In 1962, he received the Gold Achievement award of the American Psychiatric Association for improvements at Lynchburg Training School and Hospital; in 1963 a citation for meritorious service from the President's Committee on the Employment of the Handicapped; in 1970 the National Brotherhood Award of the Lynchburg Chapter of the National Conference of Christians and Jews; and in 1974 was named the first distinguished member of the Virginia Neurological Society.

In 1973, Ben stepped down as director of Lynchburg Training School—the first of several "retirements." He resumed private practice and served as a consultant for Central Virginia Mental Health Services and several other agencies, as well as doing medical-legal work. Following a second retirement in 1980, Ben gave up his consulting work but continued with his small practice. Despite heart disease and the loss of his beloved Hilde, Ben remained active. Only weeks before his death, he served as Grand Marshal of the Lynchburg Training School Christmas parade, riding past the building named in his honor in 1973.

We extend our sympathy to his son, Ralph Lewis Nagler; his daughter, Mrs. Eva Nagler Hirsch; his sister-in-law, Mrs. Ann Laub Lauer; and his brother-in-law, Dr. John Laub.

His colleagues, his friends, and his community loved, respected and admired this wonderful man with whom they were privileged to share 26 years of a long and fruitful life. Benedict Nagler was much more than a long list of accomplishments and honors. He was a caring and perceptive clinician, a kind and scholarly teacher, and witty and humorous colleague, an intelligent and insightful observer of the human race, a loving husband and father, a cherished friend.

It was an honor to know Benedict Nagler.

# There is a Name for Quality Psychiatric Care

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## COVER STORY

- On the cover** Pictures from a party: l to r, at top, Del. Clarence A. Holland, MD, Virginia Beach, and Dr. John W. Hollowell, Portsmouth; center, Gov. Charles S. Robb and Dr. Eugene R. Lareau, Harrisonburg; bottom, Del. Arthur R. Giesen, Waynesboro, and his brother, Dr. J. William Giesen, Radford
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# LETTERS

## **Amid the brickbats, he fields a bouquet**

In our present day era of DRGs, HMOs, LOS, etc., the following vignette is worth repeating.

My son, who is in practice with me, went to the hospital on New Year's Eve to see a patient. On leaving the hospital his car slid into another car at a traffic light, resulting in a dent in the other person's fender. The police came, and after some discussion the owner stated he would take \$30 and remove the dent himself. My son said, "Fine," and reached into his coat pocket for his checkbook. On doing so, he exposed his stethoscope, which he wears around his neck and had been covered by his coat. The individual stated, "Are you a doctor?" My son answered, "Yes." Then the owner stated, "You don't owe me anything, Doctor," and drove off.

Maybe we still are the "flowers" of our generation!

**Milton Ende, MD**

121 South Market Street  
Petersburg VA 23803

## **Finds charging colleagues hard to accept**

Recently there was an editorial in VIRGINIA MEDICAL presenting a viewpoint that would have been unthinkable in the past. It suggested that we charge for treatment rendered to our physician-colleagues and their families.<sup>1</sup> Of course, most physicians do have insurance that covers hospitalization for major illnesses and surgery; fees, however, are well above customary charges today.

It has been an honor and privilege for me to be asked to render obstetrical and gynecological care to a physician's wife, and my staff and I make a determined effort to make these wives know that they are valued patients. It has been my observation that physicians and their wives are more underserved, by their choice, than they are over-demanding.

Now that we have become accustomed to federal services paying for almost anyone who cannot (or will not) fund their medical care, it seems easy to say, "Everyone should pay," but it seems to me

that when we feel it is necessary to charge our fellows to care for them and their families, then commercialism is becoming paramount. Is the Hippocratic Oath changing to "Me first"?

I find it hard to accept this concept. If we do not care for our own, then Heaven help our other patients. They soon may not be able to afford us.

**George M. Nipe, MD**

1030 South Main Street  
Harrisonburg VA 22801

1. Easterly HW, III: Letter from a doctor (editorial). Va Med 1984;762

## **Speaks up for physician-owned liability insurance companies**

Many of us who spend full time on the national medical liability problem share Dr. Alvin E. Conner's conclusion, published in Virginia Medical's October 1984 issue,<sup>1</sup> that the situation will continue to get worse until soaring costs bring about an overwhelming public demand for dramatic changes in the patient injury indemnity system.

I believe Dr. Conner's analysis of which community forces will become partners in a coalition for change unfairly writes off one strong segment of the federation of medicine. The 31 medical liability insurance companies that were created by medical societies, are owned by physicians, and are now operating in this country most assuredly are dedicated to reducing preventable patient injuries and a restructured indemnity system that is both fair and less costly.

Many physician-owned companies were founded during the crisis days of the seventies in areas where commercial insurance companies had closed their doors to the medical profession. Others were established to enhance the insurance climate for their constituencies. The insurance professionals and physician policymakers connected with these companies are committed to reducing injuries and claims frequency through effective risk control activities. Unfortunately, too many physicians have yet to perceive that the correction of irritating behavior patterns in caring for patients is fundamental in risk control or that they may be part of the problem.

**Richard G. Layton**

Vice President/Marketing  
American Medical Assurance Company  
1 East Erie Street, Chicago IL 60611

1. Conner AE: "We are doing the best we can." Va Med 1984;111:610-613

## For big issues, Council schedules overtime

In a meeting animated by an unusual amount of debate, The Medical Society of Virginia's Council made some unusual decisions on January 26 at MSV headquarters.

Notably, the councilors scheduled themselves into an extended session to be held May 4 and 5 at the Hyatt House in Richmond, an unprecedented deviation from the regular one-day format. Purpose of the longer meeting: to consider issues of national scope that are impinging on the practice of medicine in Virginia and organize responses based on the views of the membership.

The decision for the two-day meeting grew out of a proposal by Dr. Harry C. Kuykendall, who was conducting his first Council meeting as MSV President. He broached the idea of a "no-frills" interim meeting of the Society's House of Delegates, to be held on an experimental basis.

"We are necessarily so preoccupied with 'in-house' matters at our meetings," he said, "that there's no time to discuss the national issues that are causing problems for us all, no time to ask, 'What are the concerns of our members?' and to try to develop some organized action on them." He emphasized debate's power to teach, saying, "We learn about the issues when we debate them", and he pointed out that the timing of a spring meeting would enable the Society to respond to more congressional issues.

Such a meeting could also be enormously helpful to the Society's AMA delegation, commented Dr.

W. Leonard Weyl, Arlington, himself an AMA delegate. "These national issues are the ones that come up at AMA meetings," he pointed out. "If we could get a reading on what the members are thinking before we go, then we could be sure we were voting accordingly."

After considerable debate, Dr. William W. Regan, Richmond, suggested settling for the two-day Council meeting to give the concept a try. His motion passed, and the meeting was set.

### Membership

Another proposal that drew debate was one advocating unified membership, i.e., all MSV members must belong also to the AMA. The motion was made by Dr. Richard L. Fields, Arlington, who is Speaker of the Society's House of Delegates; his motion sought to have the House consider making MSV-AMA membership mandatory and asked Council to endorse the concept of unified membership. Dr. Fields pointed to benefits that could accrue: an AMA ombudsman assigned to The Medical Society of Virginia; 10% discount in AMA dues; AMA staff services for special projects; briefings for MSV officers; higher rates of reimbursement to the Society for collecting AMA dues. Two states have unified membership, he related, Oklahoma and Illinois.

It was noted that a campaign to recruit both MSV and AMA members is being made by Will Osburn, Director of MSV Communications. Asked by Dr. Kuykendall to report,

Osburn told the councilors that he had made trips to the Southside, Tidewater, and Northern Virginia areas, armed with lists of doctors and working in concert with local medical societies. It's an "uphill battle," he said, and he has found a lot of apathy.

Called back to the unified membership motion at hand, the councilors expressed a length of pros and cons. When a voice vote was called, the motion passed, and the concept of MSV-AMA membership was endorsed.

More on membership was heard from Dr. William J. Hagood, Jr., Clover, chairman of the Long-Range Planning Committee last year when it commissioned a survey of Medical Society of Virginia members. Response to that survey came in from 2,559 members, or 39% of the membership, with a clear majority affirming the Society's work. This year, said Dr. Hagood, let's survey the non-members to see if we can get some answers as to why they don't belong. It will cost about \$6,000, he said, and we're not likely to get as comprehensive a response as the membership survey generated, but he felt it should be given a try. Saying that he was very much in favor of it, too, Dr. George M. Nipe, Harrisonburg, the committee's present chairman, moved to authorize the expenditure. The motion carried.

### Malpractice Legislation

Cautious optimism characterized the report of the ad hoc committee

# NEWS BUREAU

on malpractice legislation given by its chairman, Dr. Ronald K. Davis, Richmond. Although it was too early to be certain, he said, things seemed to be going well at the General Assembly. The legislators were expected to pass the joint resolution that would extend for another year the life of the legislature's joint subcommittee on malpractice, which has been meeting since last summer under the watchful eyes of Dr. Davis' committee. The resolution to extend was introduced by the subcommittee's chairman, Del. Clifton A. Woodrum (D-Roanoke), at the suggestion of The Medical Society of Virginia.

In anticipation of the resolution's passage, Dr. Davis reported, the legislators killed all the carryover bills on malpractice, including two that would have extended the cap on awards, but two were resurrected in slightly different form—a bill asking for the reporting of closed claims to the State Insurance Commissioner, which was not expected to be contested, and a bill relating to expert witnesses/standards of care.

"The plaintiff bar wants a national standard," Dr. Davis explained. "We want a local standard, and we want to require that expert witnesses practice 50% in the specialty of the defendant." Physicians have given testimony on both sides of this issue, he noted. He added that there has been confusion over the meaning of "statewide standard of care," and the House Courts of Justice Committee has charged the joint subcommittee with developing

a clear and useful definition.

Dr. Davis also described two newly introduced bills, one relating to the discovery of foreign bodies and one dealing with comparative negligence. He had no predictions as to their outcomes, but he did predict that the \$8 million in awards in a recent malpractice suit in Charlottesville could result in a premium increase for Virginia physicians if the awards are sustained on appeal. Citing a 52% increase granted this year to New York's liability carrier, he said, "No Band-Aid™ is going to fix this situation," and he asked the councilors for consulting fees so that his committee could

get on with looking into alternatives to the present system.

## Impaired Physician Program

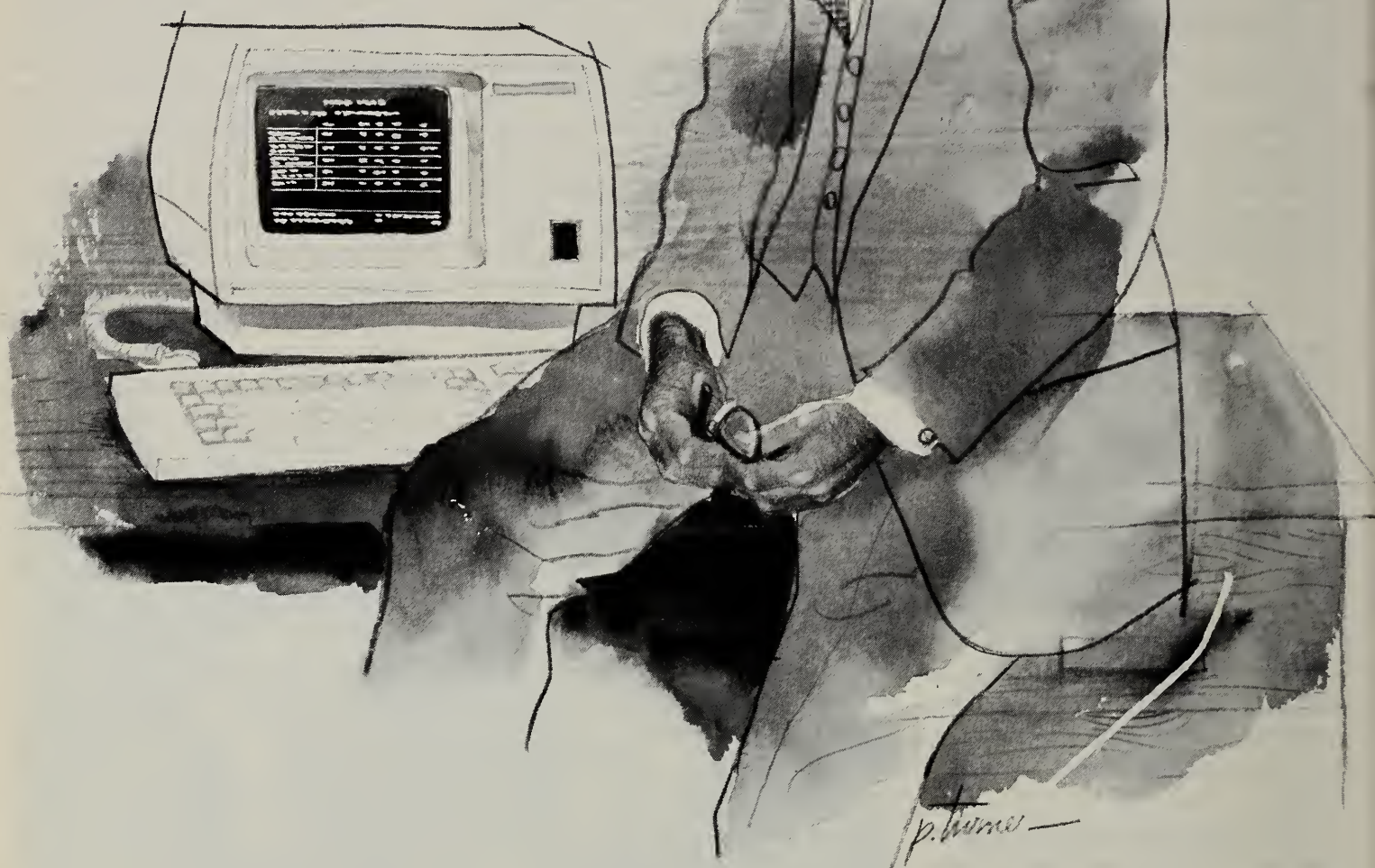
Dr. William H. Barney, chairman of the Physicians Health and Effectiveness Committee, rose to tell the Council that his committee is meeting with representatives of the State Board of Medicine to try to straighten out some glitches in communication that have led to awkward situations for physicians who have entered treatment. The discussions seem headed for a satisfactory solution, Dr. Barney said; however, other states with the same problem have found that it



**Legislators** and physicians met at the reception given by VaMPAC on the eve of the 1985 General Assembly's opening session. Above, VaMPAC's chairman elect, Dr. Gerald C. Burnett, South Boston (left), converses with Sen. Robert C. Scott (D-Newport News). Other pictures of the party appear on pages 150-153.

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could be licked only by changing the pertinent laws, so he might have to ask the House of Delegates, when it meets at the Homestead in November, to endorse similar changes in the Virginia Code. Past President C. Barrie Cook, Fairfax, moved that the Council reaffirm its support of the committee, and the councilors willingly did so.

### Peer Review

The new Medical Society of Virginia Review Organization is experiencing some glitches, too, conceded its chairman, Dr. Robert A. Morton, Norfolk, during the discussion that followed his report, but all hands are working strenuously to get the organization functioning smoothly. One councilor wondered why physicians haven't been told that they can complain when reviews seem unjust, nor notified as to how and to whom to make such complaints. Another thought some oversight of the preadmission criteria might be advisable.

On the two-pronged motion of Dr. Leon I. Block, Falls Church, the councilors voted 1) to establish an advisory board of specialists to review and determine the appropriateness of all procedures prior to their inclusion in any category of the MSVRO's preadmission criteria, and 2) to set up a mechanism whereby The Medical Society of Virginia will be apprised of all complaints about the review organization. Dr. Morton pointed out in return that 1) the organization's staff keeps a watch on criteria all the time, modifying them as advisable, and 2) the MSVRO should be apprised of all complaints received by the Society.

The Medical Society of Virginia Review Organization is subcontracting to do concurrent review, Dr. Morton revealed, and is also getting into "private" review, i.e., preadmission review of elective surgical or medical procedures for non-

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Medicare patients. As he spoke, MSVRO contracts for private review were under discussion with the State of Virginia and a postal union.

Big business is going for private review because it gives them some control over hospital admissions, Dr. Morton continued, and six to eight companies have sprung up over the country to provide the service. One of them is Health Care Net of Washington, DC. Most of them conduct reviews by Watts lines.

Dr. Morton also described a new review system instituted by the Metropolitan Life Insurance Company. It stipulates that the subscriber/patient must initiate preadmission review by calling Metropolitan, whose representative then calls the doctor; if the patient fails to take this first step, only 80% of benefits are allowed. When a hospitalized patient's stay must be prolonged, the doctor must call Metropolitan for review of the extension. The carriers have regional data on hospital costs, said Dr. Morton, so they know what expense to expect.

### New Projects

There's no data yet on The Medical Society of Virginia's For-Profit Subsidiary Corporation, because it's brand new, Dr. Kuykendall announced, but it's in place as formulated by the Society's legal counsel and ready to be used. To illustrate the ways in which a similar satellite is being used by a medical society in Rockville, Maryland, Dr. Kuykendall had invited Harold F. Frye, who

heads up the Montgomery County Medical Society's for-profit corporation, to tell the councilors how that corporation is producing revenue.

Frye described a long list of services, most of them relating computer technology to office management: they include a mailing service giving access to the society's 1,300 members and a collections service by the same agency endorsed by The Medical Society of Virginia. (See the brochure at page 136.) Considerable revenue has been realized, Frye concluded, but there's a hitch: Some of the members don't think it's appropriate for a medical society to make money.

Such an objection cannot be made to the corporate arm under study by the Scholarship Committee and discussed by the chairman, Dr. Anthony J. Munoz. It is a non-profit foundation to provide loan funds for medical students, toward which legal counsel is conferring with the committee. Medical students had been asked to look over a highly tentative prospectus, and David J. Muron of the Medical College of Virginia Student Medical Society had come to the meeting to comment. The fund is an admirable idea, he said, but he had a few questions. For instance, the eligibility section seemed to leave out first-year students, which he didn't understand because the first year is just as expensive as the succeeding three years. Second, regarding the suggested \$2,000 loan limit, he called the councilors attention to the fact that the tuition for one semester of 1984 at the Medical Col-

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## Disciplinary study group gets underway

Discussions are in progress by The Medical Society of Virginia's newly created ad hoc committee to study the disciplinary functions of the State Board of Medicine. As this was written, an 18-member committee appointed by President Harry C. Kuykendall had met twice and other sessions were being scheduled.

Authorized by the House of Delegates at the Society's annual meeting in Williamsburg last November, the committee is a response to questions raised in a series of articles on Virginia's disciplinary mechanism published by the Roanoke Times & World-News. The two authors of that series, Douglas Pardue and Charles Hite, appeared before the committee at its first meeting. Questioned for more than an hour, the newsmen responded "in a very favorable way," Dr. Charles M. Caravati, Jr., the committee's chairman, said later.

Also present at the first meeting

was Dr. Edwin L. Kendig, Jr., the Board of Medicine's president, who outlined the Board's salient needs. (See his editorial on page 190.) As this was written, legislation sympathetic to these needs was moving through the General Assembly.

For the committee's second meeting Dr. Caravati put together an agenda that included appearances by Dr. William H. Barney, chairman of The Medical Society of Virginia's Physicians Health and Effectiveness Committee; Eugenia K. Dorson, the Board of Medicine's executive secretary; H. Bryan Tomlinson, II, director of the Department of Health Regulatory Boards, and Gary Anderson, compliance manager for the department's investigators and inspectors. The Department of Health Regulatory Boards is a state agency whose director is appointed by the governor and reports to Joseph L. Fisher, Secretary of Human Resources.

To future meetings Dr. Caravati

lege of Virginia was \$2,591.

Dr. Munoz welcomed the comments and said that the committee would heed them when/if a legal instrument is framed.

Two other students were heard. Jean Marangu of the MCV Student Medical Society reacted very favorably to a credit card package for students being put together by The Medical Society of Virginia, and Dan McKernan, University of Virginia medical student, had good things to say about an MSV-sponsored health insurance plan for students.

### Congressional Lunch

There were other reports to hear. The one from Dr. Frederick K. McCune, Virginia Beach, described a statewide speakers' bureau the

Public Relations Committee is developing, and Mrs. H. Alan Bigley, president of the MSV Auxiliary, described a wide range of activities in progress.

It was late in the day when Dr. Kuykendall brought the meeting to a close, but before he did, the councilors agreed on yet another May get-together, this time a frilly one. Set for May 14 and 15 was their Annual Congressional Luncheon for Virginia's legislative contingent in Washington. It will include accommodations at the new Radisson Mark Plaza Hotel, briefings by bigwigs from the White House and the Department of Health and Human Services, and luncheon amid the glowing mahogany panelling of the Capitol's Mike Mansfield Room.

—ANN GRAY

planned to invite someone from the Virginia State Bar; he also hoped to have information from three states that have been making changes in their regulatory boards—Florida, Oregon, and Texas. Can he forecast, he was asked, when the committee may have a report ready? "Maybe by late spring or early summer."

Serving on the committee are these Medical Society of Virginia members: Dr. Gerald J. Bechamps, Winchester; Dr. Gerald C. Burnett, South Boston; Dr. Russell D. Evett, Norfolk; Dr. A. Ashley Futral, Jr., Winchester; Dr. John W. Hollowell, Portsmouth; Dr. Eugene R. Lareau, Harrisonburg; Dr. Antonio M. Longo, Alexandria; Dr. C. M. Kinloch Nelson, Richmond; Dr. James L. Patterson, Jr., Pulaski; Dr. William H. Sipe, Newport News; and Dr. Donald S. Thorn, Annandale. Dr. Bechamps and Dr. Burnett are members of the Board of Medicine; the others are councilors or vice councilors.

To complete the committee Dr. Kuykendall appointed these: State Sen. John C. Buchanan, MD, and Del. J. Samuel Glasscock of the Senate and House Health Committees; Ann G. Gerhardt, past chairman of the advisory Commission of Health Regulatory Boards, an oversight body appointed by the governor; Maston T. Jacks, deputy attorney general; Judge John Wingo Knowles of the Henrico County circuit court; and Anne Dobie Peebles, rector of the College of William and Mary.

—A.G.

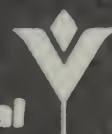
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# Launching the legislature

On the eve of the General Assembly's opening session, Medical Society of Virginia members who also belong to VaMPAC gave the legislature's leadership a rousing send-off with a party at the Commonwealth Club in Richmond. Prodigies of culinary artistry crowded the tables. A bar welcomed those who were thirsty.

Spotlights shone on a majestic ice sculpture of the Capitol's columned facade.

Gov. Charles S. Robb came. So did Lieut. Gov. Richard J. Davis. So did lots of other Very Important People, including six past presidents of The Medical Society of Virginia: Dr. Richard E. Palmer, Dr. Raymond S. Brown, Dr. W.

Leonard Weyl, Dr. William J. Hagood, Jr., Dr. Percy Wootton, and Dr. Harold L. Williams, who as VaMPAC chairman greeted the guests at the door.

Virginia Medical's photographer was there and took the pictures on these and the following pages.

*Photographs by Tim Wright*



Above, reading clockwise, Dr. W. Leonard Weyl, Arlington, Dr. James A. Shield, Jr., Richmond, and Del. Clifton A. Woodrum (D-Roanoke) listen to Del. Mary A. Marshall (D-Arlington), whose curly hair appears at bottom.



Dr. Charles H. Crowder, Jr., South Hill, right, captures the attention of Sen. Robert C. Scott (D-Newport News), left, and Del. Richard M. Bagley (D-Hampton).



Left, a Tidewater topic engages Dr. Glenn H. Shepard, Newport News, and Del. S. Wallace Stieffan (D-Hampton).

Below, Gov. Charles S. Robb grasps the hand of Dr. William J. Hagood, Jr., Clover.







Above, Del. Warren G. Stambaugh (D-Arlington) has a message for Dr. Henry S. Campell, Martinsville.



Left, Dr. Robert M. Kesler, Norfolk, amuses Del. Owen B. Pickett (D-Virginia Beach).



...s the tale told by Sen. Hunter B.  
er.



Delegate Woodrum, left, has information for Dr. James L. Ghaphery, center, and Dr. Charles M. Caravati, Jr., Richmond.



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# WHO'S WHO

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## IN VIRGINIA MEDICINE

For the first time in 14 years the folks of Haymarket, Virginia, have a physician to call their own. He is **Dr. Gilbert R. Irwin**, whose sole practice previously was in Manassas, but who has opened a second office next to the hardware store in downtown Haymarket and there sees patients six days a week. Previously, Haymarket's 250 citizens had to travel to Gainesville, Manassas, and beyond for treatment.

Dr. Irwin and his family have lived on an 80-acre farm five miles outside of Haymarket for the past dozen years. An internist, he was graduated from the New Jersey College of Medicine, then trained at Georgetown University, followed by a four-year stint at Walter Reed Hospital, where he did research in infectious diseases for the US Army.

According to a story in the *Potomac News* by Ruth Larsen, "Dr. Irwin is the third or fourth—old timers can't quite recollect—in a line of Haymarket doctors dating back to the 1900s. Most remembered, because of his 54-year tenure, is Dr. Wade Payne, who has a town street, Payne Lane, named after him." He died at the age of 80 and was followed by **Dr. J. Lee Mathews, Jr.**, who was the town's doctor from 1960–1969 and is now director of emergency services at Prince William Hospital in Manassas.

A young surgeon with roots in Virginia has been appointed head

of the new cardiac surgery program at the East Carolina University School of Medicine in Greenville, North Carolina. He is **Dr. W. Randolph Chitwood, Jr.**, whose father, **Dr. W. R. Chitwood**, is a retired Wytheville physician. Dr. Randolph Chitwood graduated from the University of Virginia School of Medicine in 1974 and recently completed a ten-year residency in cardiac surgery at Duke.

**Dr. Edward S. White**, Onancock, has been elected chairman of the Virginia Board of Examiners for Nursing Home Administrators. Dr. White is a family practitioner.

In Bordeaux, France, for the Fifth International Symposium on the Facial Nerve, **Dr. Francis H. McGovern** of Danville was inducted into the Great Council of Bordeaux Wines, which he says, "is much like being given the keys to the city of Danville." Symbol of the honor was a ribboned pendant to be worn about the neck, just as a sommelier wears the key to his wine cellar. Dr. McGovern, an otolaryngologist, and **Dr. Jose Estevez**, Danville pathologist, were speakers at the symposium, reporting recent results in their studies of Bell's palsy.

**Dr. Thomas McPherson Brown**, director of the Arthritis Institute at the National Hospital for Orthopaedics and Rehabilitation in Arlington, has been appointed to the Food and Drug Administration's Arthritis Advisory Committee, which reviews and evaluates the safety and effectiveness of prescription drugs used in the treatment of arthritis.

**Dr. Norman M. Warren**, Martinsville, and **Dr. Wayne T. Hutchison**, Bedford, have been named fellows of the American Academy of Family Physicians, and **Dr.**

**George D. Shoup, Jr.**, Kilmarnock, has been elected to fellowship in the American College of Surgeons.

At their annual meeting in Hot Springs, Virginia, members of the Southern Psychiatric Association reelected **Dr. Owen W. Brodie**, Richmond, as secretary-treasurer.

For his service to the community of Galax, **Dr. Virgil J. Cox** was given a plaque at a party honoring his 80th birthday. Dr. Cox has not only served Galax long and well as a general practitioner but from 1962 to 1965 was Grayson County's representative to Virginia's House of Delegates.

Winners of watches at the David A. Dyer exhibit booth during The Medical Society of Virginia's annual meeting in Williamsburg were these three physicians: **Dr. Raymond S. Brown**, Gloucester; **Dr. Erwin M. Jacobs**, Petersburg; and **Dr. William H. Hatfield**, Blacksburg. In a ceremony at the same meeting, **Dr. Robert S. Brown**, Charlottesville, was given the Army Achievement Medal for his efforts toward recruitment of other physicians for the Medical Corps of the United States Army Reserve.

The Bedford County Medical Society has these new officers: **Dr. Aquiles Amparan**, president, and **Dr. Wayne T. Hutchison**, secretary-treasurer.

New president of the Virginia Beach Medical Society is **Dr. Peter B. Blanchard**, surgeon, who assumed the leadership post with the New Year. Serving with him are **Dr. Thomas M. Krop**, president elect; **Dr. Duncan S. Wallace**, secretary; and **Dr. William S. Teachey**, treasurer.

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# Diagnosis and Management of the Less Common Venereal Diseases

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The author reviews those venereal diseases with cutaneous manifestations which tend to receive less attention in the general medical literature. Clinical features, diagnostic procedures, and treatment regimens are discussed, as well as controversies reflecting the progress of current investigative work.

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**I**N this review I will consider the sexually transmitted diseases with cutaneous manifestations which tend to receive less attention in the medical literature than syphilis, gonorrhea, non-gonococcal urethritis, or *Herpes simplex* infections. Actually, some of these diseases—for example, condyloma acuminata, are encountered commonly in venereal disease clinics; others, notably scabies, are not always considered venereal diseases but are probably often transmitted in this manner.

## Genital Warts

A variety of clinical types of warts may develop on genital skin, including verruca vulgaris and ver-

ruca plana. **Condyloma acuminatum** represents a particular variant of wart in which there are fleshy, markedly papillomatous growths on genital skin and mucous membranes, often described as “cauliflower-like” in appearance. There is a known high frequency of transmission between sexual contacts.

The incidence among adults appears to be increasing, and is currently of epidemic proportions. There is also evidence of an increasing frequency of condylomata in prepubertal children.<sup>1</sup> It should be noted that the disease can be transmitted to children by non-coital routes. In addition, perianal warts and laryngeal papillomas have been reported in infants born of mothers with vaginal warts.

Knowledge of the immunologic factors influencing the development and regression of warts is increasing, although the precise relationship between the antigenicity of warts and the host response is still incompletely understood.<sup>2</sup> Both humoral and cell-mediated mechanisms are implicated in wart rejection. An increase in human papilloma virus (HPV)-associated IgG has been associated

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with a shorter duration and lesser number of warts, and anticellular IgM has been found more often in patients responding well to therapy than in those who are resistant to therapy.<sup>3</sup> However, cell-mediated mechanisms may be more important, with HPV-specific antibody representing a secondary phenomenon.

Clinical diagnosis is usually straightforward, but atypical or unusually persistent lesions should be biopsied, since there have been rare instances of malignant degeneration in condylomata. In addition, there is a condition which mimics condyloma acuminatum clinically and histologically known as "giant condyloma of Buschke and Loewenstein." These tumors have the appearance of unusually large and extensive condylomata but are in reality forms of verrucous carcinoma. Biopsy should help to clarify the diagnosis in difficult cases.

Treatments of condyloma acuminatum include topical podophyllin, curettage, electrosurgery, and cryotherapy. Podophyllin is contraindicated in pregnancy, since it is a known teratogen and has been associated with stillbirth, maternal respiratory distress and muscle weakness. The guidelines for treatment of condylomata are as follows:<sup>4</sup>

- External genitalia and perianal region: Podophyllin 10-25% in tincture of benzoin applied to warts and washed off in 1-4 hours (depending on the degree of discomfort experienced by the patient). If there has been no regression after four weekly treatments, an alternative approach (cryotherapy, electrocautery, or surgery) is recommended.
- Cervical region: Podophyllin, as described above.
- Vaginal region: Podophyllin is again recommended, provided the substance is allowed to dry thoroughly before removing the speculum. Large quantities are to be avoided. Alternative therapies may also be used.
- Urethral meatus: If warts are accessible, the same approaches as described above may be taken. Urination in 1-4 hours will effectively wash off the applied podophyllin. However, intraurethral warts require urethroscopy for proper assessment. Intraurethral 5% 5-fluorouracil (5FU) or thiotepa are recommended in these cases; podophyllin should not be used.
- Anorectal region: Accessible warts may be treated with podophyllin or other regimens as outlined for perianal warts. Inaccessible warts require proctoscopy for assessment. Many experts avoid the use of podophyllin in this region.
- Oral region: Similar warts in the oral cavity should be treated with cryotherapy, electrocautery, or surgery.

In general, podophyllin works best in moist intertriginous areas; condylomata on the penile shaft are notoriously resistant to podophyllin therapy. Application of large quantities of this compound to extensive areas is risky, as systemic toxicity may result. Many experts apply a coat of petrolatum around the warts to prevent irritation of normal skin. It is also important to emphasize the need to wash off the podophyllin in the recommended time period. Otherwise, marked irritation, erosion, and secondary infection may result.

Recently von Krough<sup>5</sup> compared the effectiveness of alcoholic solutions of 20% podophyllin, 8% podophyllotoxin, and 8% colchicine in the treatment of penile condylomata. He found similar results with all three treatments when applied once weekly for two applications. Up to 68% of patients were cured, though there were some relapses after one month. In a more recent study<sup>2</sup> von Krogh again found comparable results for these three treatments when used at weekly intervals. Disappointingly, only one-third were cured by one treatment and an additional 15% by a second treatment. Poor outcome was predicted by the presence of more than five warts or a duration of over six months. However, refractory lesions were eradicated in 60% of patients by daily applications of 5% 5FU for 2-3 weeks. Good results were also obtained with twice daily self-administration 0.5% podophyllotoxin, with greater safety than podophyllin.<sup>2</sup> Simmons et al compared cryotherapy with electrocautery in the treatment of genital warts.<sup>6</sup> There was no significant difference in efficacy between the two methods, but patients preferred cryotherapy, and both were considered better than podophyllin. Perhaps most exciting is the work of Abcarian and Sharon, in which they demonstrated the effectiveness of a crude, killed virus vaccine in the treatment of anal condylomata. They obtained a cure rate of 95% among 200 consecutive patients, and there were no recurrences among the 168 followed for four years.<sup>7</sup> Refinements of this type of vaccine may represent significant breakthroughs in the treatment of condyloma acuminatum.

**Bowenoid papulosis** is a recently described condition which consists of solitary or multiple small, pigmented or flesh-colored papules occurring on the genitalia or perianal area of young persons<sup>8,9</sup> (Fig. 1). They are usually diagnosed as warts or nevi. The significance of these lesions is that histologically they have features suggestive of carcinoma in situ, and in the past such patients have sometimes been subjected to radical surgery. However, bowenoid papulosis usually responds to conservative antiwart

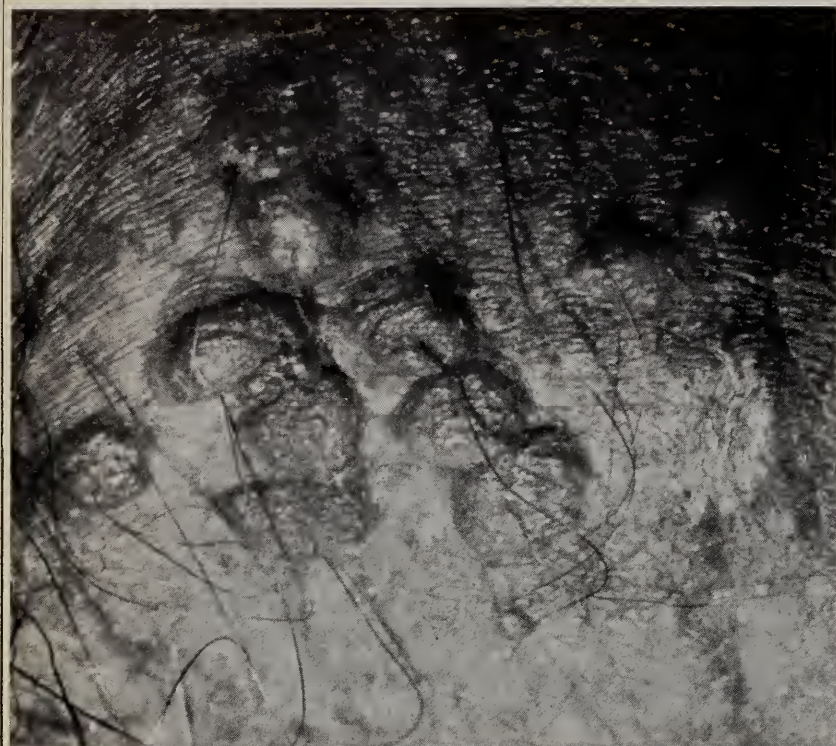


Fig. 1. Closeup view of multiple lesions of bowenoid papulosis on genital skin

therapy (curettage, cryotherapy, 5FU) and, although recurrences are common, no clearly documented case of invasive malignancy arising from one of these lesions has been reported.

An investigation of over 100 cases of bowenoid papulosis<sup>10</sup> has confirmed the benign nature of these lesions and has shown that, despite the histologic evidence of atypia, there are characteristic features which enable a correct diagnosis, even in the absence of clinical data.

Several electron microscopic studies have shown viral particles resembling HPV within keratinocytes of lesions of bowenoid papulosis,<sup>10,11</sup> and immunoperoxidase techniques have demonstrated HPV antigen in tissue sections of these lesions.<sup>10</sup> More recently the disorder has been linked to HPV type 16, providing further evidence of the viral nature of these lesions but arousing concern because of the link between this same HPV type and cervical cancer.

The cautious approach to this disease is to treat lesions conservatively. Curettage, electrocautery, cryotherapy, or topical 5% 5FU may be used. Podophyllin should perhaps be avoided, partly because its effects on atypical epithelium are uncertain, and also because podophyllin itself may produce cytologic atypia in skin; these changes are especially prominent if a biopsy is performed within 72 hours of application. Women should probably undergo a gynecologic evaluation, to include exami-

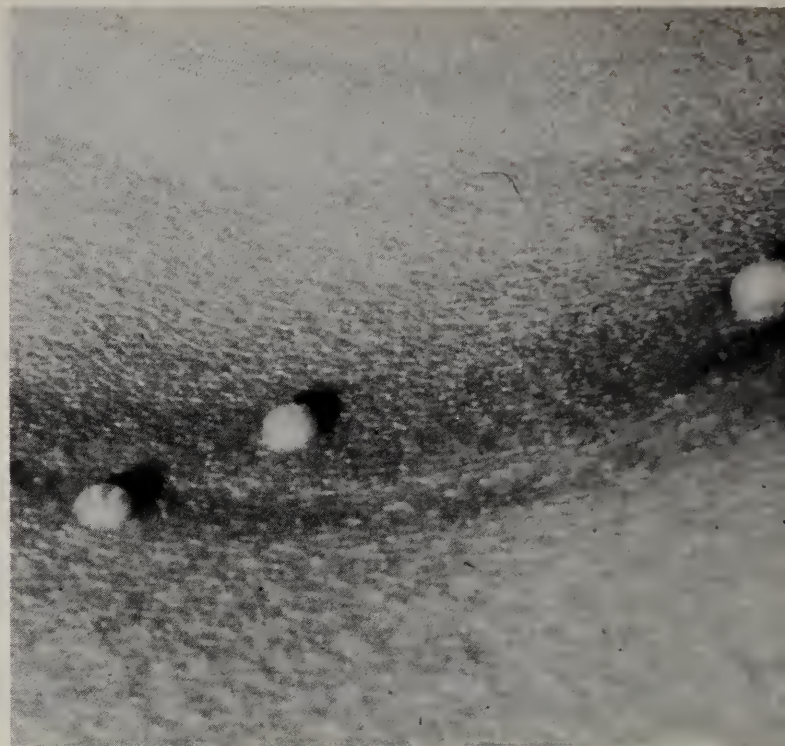


Fig. 2. Typical dome-shaped papules of molluscum contagiosum.

nation of the cervix and vaginal vault. Long-term followup of these patients is recommended, perhaps at yearly intervals if there have been no recurrences.

**Molluscum contagiosum** is produced by an organism of the poxvirus group, and shows many of the same clinical features seen in infections caused by HPV (Fig. 2). The small, umbilicated, flesh-colored papules frequently occur in the genital region, and circumstantial evidence strongly suggests venereal transmission. Molluscum lesions appear to arise when there is a specific or generalized defect in cell-mediated immunity. An example of such a defect is the patient of Pauly et al,<sup>12</sup> who had molluscum contagiosum, atopic dermatitis, elevated IgE levels, and cutaneous anergy. However, most persons with these lesions are otherwise healthy. Each molluscum lesion lasts several months, but infection may persist for several years. Spontaneous regression of these lesions occurs; often, inflammation of individual lesions or eczematous dermatitis accompanies this regression phenomenon.

Diagnosis of molluscum contagiosum is usually easy. When in doubt, this simple office procedure should help: Curette a lesion, press between two microscopic slides, apply water or potassium hydroxide and a cover slip, and examine under a microscope; typical clusters of Henderson-Paterson inclusion bodies are then observed.

Treatment at present is limited to local destruc-

tion of lesions, including curettage, freezing with liquid nitrogen, and applications of trichloroacetic acid.

### Chancroid

Chancroid is an infectious disease of the genitalia caused by a gram-negative bacillus, *Hemophilus ducreyi* (Fig. 3). It is characterized by painful, non-indurated ulcers which develop after an incubation period of 3-5 days. Multiple lesions are common and result from autoinoculation ("kissing lesions"). Inguinal adenitis accompanies the disease, is most often unilateral, and may either resolve or suppurate.

The disease is most often seen in tropical and subtropical areas, among the indigent, in large cities and seaports, and in areas where there are high concentrations of military troops. It is relatively uncommon in the United States, with about 1,000 reported cases per year.<sup>13</sup> However, there is evidence of a rising incidence in this country, including a documented outbreak in Orange County, California in 1981.<sup>14</sup>

Unequivocal diagnosis depends upon demonstration of the organism by means of smears or culture. Smears are prepared by cleansing a lesion with normal saline, obtaining serous exudate from the border of ulcer, applying to a glass slide, heat-fixing and Gram-staining.<sup>13</sup> One looks for clusters and short parallel chains of gram-negative bacilli. Unfortunately, technical errors and the frequent presence of contaminating organisms make interpretation difficult. Culture is also difficult, because the organism is fastidious and requires special media for growth. Biopsy specimens stained with giemsa<sup>13</sup> or silver impregnation methods such as the Dieterle stain<sup>15</sup> may reveal organisms extracellularly or within histiocytes in the region of the superficial ulcer. In addition, the histologic configuration of chancroid lesions may itself be sufficiently characteristic to allow diagnosis; typically, there is a superficial ulcer with many neutrophils, an underlying vascular proliferation zone, and beneath this region an inflammatory infiltrate of lymphoid and plasma cells.

It should be added that in busy venereal disease clinics it is often difficult to perform these tests with regularity, so that diagnosis often depends upon recognition of the clinical features and negative tests for syphilis. It should also be remembered that this disease can coexist with other venereal diseases; for instance, 12%-15% of patients with chancroid are found to have concomitant syphilis.<sup>13</sup>

Treatment of chancroid has sparked lively con-

troversy. The "official" treatment of choice is erythromycin 500 mg PO qid, or trimethoprim 160 mg/sulfamethoxazole 800 mg orally bid, either for a minimum of ten days or until ulcers or nodes have healed.<sup>4</sup> Fluctuant nodes should be aspirated (not incised and drained) through normal skin; compressing of ulcers may also be employed. Sexual partners should be treated with a ten-day course of one of the above drugs. If there is no response, antimicrobial sensitivity tests are required.

Sulfonamides such as sulfisoxazole, with or without tetracycline, (3 gm sulfisoxazole initially, followed by 1 gm PO qid; tetracycline 500 mg PO qid, either or both for two weeks), have also been recommended by some authors.<sup>13,14</sup> However, others point out the evidence for resistance to these therapies as well as the potential masking of coexis-



Fig. 3. Characteristic shallow ulcer of chancroid caused by *Hemophilus ducreyi*.

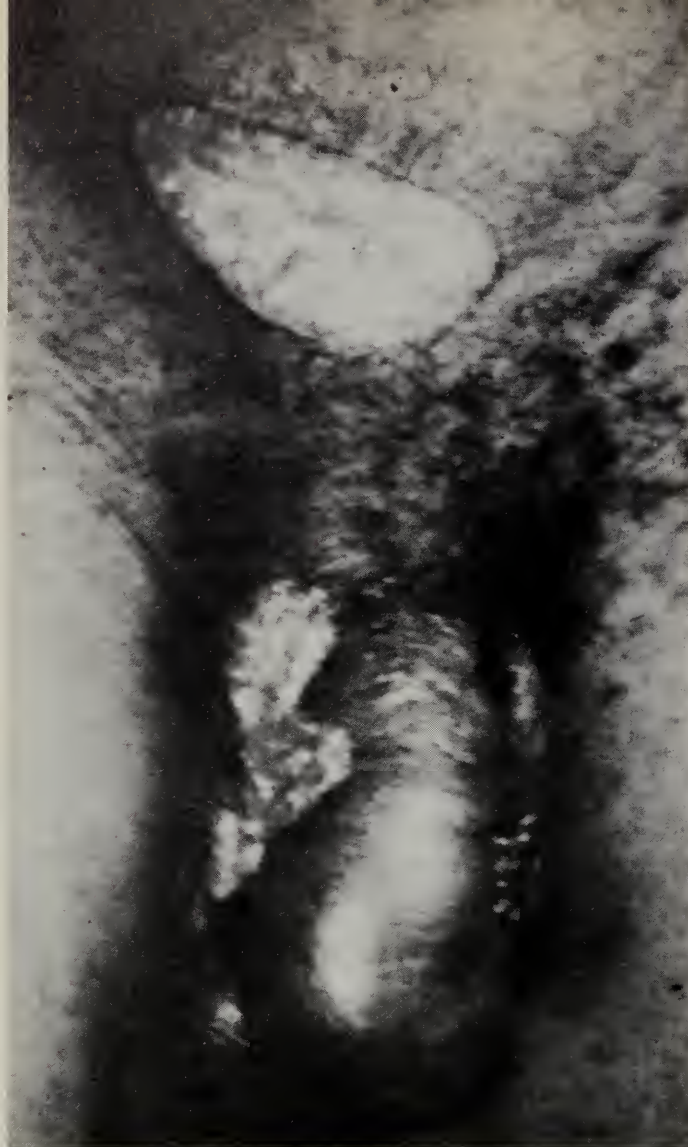


Fig. 4. Extensive genital ulcerations and penile edema associated with granuloma inguinale.

tent syphilis by tetracycline; these authors prefer erythromycin or trimethoprim/sulfamethoxazole, used in the manner outlined above.<sup>14</sup>

#### Lymphogranuloma Venereum

This sexually transmitted disease is caused by *Chlamydia trachomatis*, an obligate intracellular parasite with close structural, biochemical, and reproductive resemblance to *Rickettsia*. Unlike the strains which produce urethritis, those strains of *C trachomatis* responsible for lymphogranuloma venereum readily enter host cells upon inoculation and progress to infect a large number of host cells.<sup>16</sup>

After an incubation period of from three to 30 days, a small papule or painless erosion may arise on genital skin. This lesion is transient and rarely seen. One to two weeks later, inguinal adenopathy develops; it may be either unilateral or bilateral. Typically, tender lymph nodes enlarge above and below Poupart's ligament, producing the "groove" sign. The nodes may rupture, eventually leading to extensive sinus tract formation. The skin in these areas becomes indurated and takes on a characteris-

tic purple hue. There may be an acute rectal syndrome of pain, tenesmus, discharge, and colitis. Adenopathy may subside in 8-12 weeks, but fistulas and sinus tracts persist. Lymphatic obstruction may result in elephantiasis of penis and scrotum or of the vulva (esthiomene). Other skin signs which may accompany the disease include erythema nodosum, erythema multiforme, urticaria, and photosensitivity.

Diagnosis most often rests upon a combination of clinical features and rising complement fixation titers. An antibody titer of at least 1:64 is present in most patients. A microimmunofluorescence test is also available and often yields titers of up to 1:1024<sup>17</sup>.

Diagnosis of *Chlamydia* infection can be made by cytologic examination of smears stained with giemsa or the fluorescent antibody method; particles can then be found within vacuoles adjacent to nuclei of infected cells.<sup>18</sup> The usefulness of this technique in the diagnosis of lymphogranuloma venereum is questionable. Culture of *C trachomatis* is accomplished using embryonated hen's eggs, McCoy cells (mouse fibroblasts), or other media.<sup>18</sup> A skin test antigen is not now commercially available. (When it was used, the skin test produced false negative readings in up to 20% of cases and frequently interfered with complement fixation results.) Biopsy of involved lymph nodes often reveals a typical "stellate" abscess composed of three zones: a central neutrophilic zone, a palisade of histiocytes, and a peripheral infiltrate of mononuclear cells.

The treatment of choice is tetracycline 500 mg PO qid for at least two weeks. Alternatives which are active in vitro but have not undergone extensive testing in vivo include: doxycycline 100 mg PO bid; erythromycin 500 mg PO qid; and sulfamethoxazole 1 gm PO bid, each for two weeks. Fluctuant nodes should be aspirated. Surgical intervention is indicated for strictures or fistulas.<sup>4</sup>

#### Granuloma Inguinale

Granuloma inguinale is a slowly progressive ulcerative disease caused by *Calymatobacterium granulomatis*, a gram-negative bacillus with properties similar to *Klebsiella*. The disease begins as a papule, nodule, or ulcer after an incubation period of perhaps 3-6 weeks. Untreated, ulcers enlarge and spread from the genitalia to the inguinal region or perineum (Fig. 4). These ulcers characteristically display a red, beefy, granulating base. Destruction may be extensive, and squamous cell carcinoma has been known to supervene. Subcutaneous nodules

may arise which resemble lymph nodes (pseudobuboes), but true adenopathy is rare.

Diagnosis is usually made by identifying the organism in smears, tissue imprints, or biopsy specimens. Biopsy of an ulcer margin shows pseudoepitheliomatous hyperplasia, dermal edema, and a relatively dense infiltrate composed of histiocytes, plasma cells and small clusters of neutrophils. Intracytoplasmic inclusion bodies, called Donovan bodies, are seen within histiocytes; these are small, ovoid bodies measuring 1-2  $\mu\text{m}$  in diameter. They are best demonstrated with special stains, such as giemsa or silver methods. Antibodies to the organism may be detected by complement fixation.

Treatment of granuloma inguinale includes tetracycline 500 mg qid or streptomycin 2 gm daily, either for three weeks. Tetracycline and sulfas, ampicillin, lincomycin, chloramphenicol, and gentamicin are other therapies which have been used.

### Amebiasis

Amebiasis is an uncommon sexually transmitted infection caused by a variety of organisms, most commonly *Entamoeba histolytica*. Other organisms include *Iodamoeba butschlii*, *Endolimax nana*, *Giardia lamblia*, *Dientamoeba fragilis*, and *Enterobius vermicularis*. Man usually becomes infected by ingesting cysts found in contaminated water or food. Trophozoites excyst in the small intestine and pass into the colon, where colonization and mucosal invasion occur. Trophozoites apparently reproduce by binary fission on the mucosal surface; trophozoites and cysts may then be passed in the stools<sup>19</sup>.

As a venereal disease, amebiasis results from ano-genital or ano-oro-genital transmission. There is evidence for a high prevalence of infection with *E histolytica* and *G lamblia* among homosexual and bisexual males and a significant association with oral-anal sexual practices.<sup>20</sup> However, there is also a disparity between the frequent isolation of these organisms and the relative infrequency of clinical disease, partly explained by the fact that only one of the four groups of *E histolytica* identified on isoenzyme electrophoresis produces clinical amebiasis.<sup>20</sup> Infection may involve the vagina, prepuce and glans penis. Skin lesions are typically ulcers with undermined borders, but epithelial hyperplasia can also produce thickened, warty lesions suggestive of carcinoma. Ulcers are usually painful and produce regional lymphadenopathy.

The diagnosis is made by finding trophozoites in material obtained from the ulcer margin or in biopsy specimens. These organisms measure 60  $\mu\text{m}$  in



Fig. 5. Pustular lesions characteristic of *Candida* balanoposthitis.

diameter, have a finely granular cytoplasm, and possess a single eccentric nucleus with a central karyosome.<sup>21</sup> They must be distinguished from histiocytes and ganglion cells, which have somewhat similar features.

Treatment includes use of both a systemically active drug and a luminal amebicide: metronidazole 750 mg PO tid for 5-10 days, plus diiodohydroxyquin 650 mg PO tid for 20 days or diloxanide furoate 500 mg PO tid for 10 days.<sup>4</sup> A second choice is paromomycin 25-30 mg/Kg/day in three divided doses for seven days. Asymptomatic cyst passers may receive luminal amebicides alone in the above dosages.

### Candidiasis

Candidiasis is a common infection of the female genital tract, and *Candida albicans* is a frequent isolate from the cervix and vagina as well as the stool. This infection can be sexually transmitted, and 10% of male contacts of women with vaginal infections have *Candida* balanoposthitis (Fig. 5). *Candida* has also been cultured from the semen of

males whose female partners have recurrent infection.

*Candida albicans* is a resident in intertriginous areas, where hydration and maceration promote its growth. Drug therapy, particularly with antibiotics but also immunosuppressives and possibly oral contraceptives, may also be factors in the development of *Candida* infection.<sup>22</sup>

In therapy of candidiasis, treatment of both sexual partners is necessary. In women, both the vaginal region and the intestinal source need to be treated. Therapy should also include the oral cavity and nails when these locations are involved. Effective topical preparations include imidazole derivatives such as miconazole and clotrimazole. (Tolnaftate is not effective for candidiasis.) Twice daily application of these preparations (either cream or lotion) should be continued for two weeks when treating the skin. Intestinal candidiasis can be treated effectively with oral nystatin tablets, one or two (500,000 to 1,000,000 units) three times daily, to be continued until 48 hours after clinical cure.

### Pediculosis

Skin-to-skin transmission clearly occurs in louse infestation, and pediculosis pubis is a sexually transmitted disease. Patients with pubic lice are often found to have another venereal disease. In a recent Scandinavian study, Munkvad and Klemp found that 15% of women and 7% of men with pediculosis pubis also had gonorrhea, for which almost all of the women and half of the men were asymptomatic.<sup>23</sup>

Pediculosis pubis may range from an infestation almost devoid of symptomatology to an exceedingly pruritic disease. Examination reveals adult lice attached to suprapubic and genital skin, and nits distributed along hair shafts. The adult lice may resemble pigmented spots to the inexperienced examiner, but close inspection readily reveals their true identity. Excoriations may be numerous. Rarely, small blue macules (maculae ceruleae) may be seen. These spots are believed to result either from altered host blood pigments or from a product of louse saliva.

Treatment for pediculosis pubis is lindane 1% lotion or cream applied to the involved area and washed off after eight hours, or lindane 1% shampoo applied for four minutes and then washed off. This treatment is not recommended for pregnant or lactating women. An alternative therapy consists of pyrethrins and piperonyl butoxide, applied and washed off after ten minutes. Treatment of sexual contacts is essential. Treatment should be repeated

in seven days if adult lice are found or eggs are present at the hair-skin junction. Clothing that has been contaminated within 48 hours of treatment should be washed before reusing.

### Scabies

Close physical contact is an important factor in the transmission of this common and epidemic infestation; therefore, scabies is also, in a sense, a sexually-transmitted disease.

This extremely pruritic condition is characterized by excoriated papules and burrows which are commonly located on the genitalia in addition to such other classic locations as flexor wrists, fingerwebs, elbows, and trunk. Definitive diagnosis depends upon demonstration of the mite, which is usually found in the small, thread-like burrows. The latter structures can sometimes be demonstrated by the burrow ink test, in which ink from a fountain pen is applied to a lesion and wiped off, thereby revealing the darkened outline of the burrow. A drop of oil is applied to a scalpel blade, and the burrow is unroofed and gently scraped (a thin shave of the burrow is also effective). The obtained material is applied to a glass slide and examined with a microscope. The characteristic organisms, eggs, and/or fecal material confirm the diagnosis.

The treatment of choice for adults and older children is lindane (gamma benzene hexachloride). One ounce of the 1% lotion or 30 gm of the 1% cream is applied to entire cutaneous surface below the neck, and removed in eight hours. It should not be used for pregnant or lactating women. An alternative treatment is crotamiton 10% cream applied nightly for three nights. It is permissible to bathe before reapplying, and bathing is recommended 24 hours after the final application. Another alternative is 6% precipitated sulfur in petrolatum, applied nightly for three nights. Pregnant or lactating women and children under 10 should be treated with crotamiton or sulfur. All sexual and household contacts should also be treated. Itching often persists for several weeks despite adequate therapy; therefore, retreatment in one week is indicated *only* if there has been no improvement. All clothing and linen contaminated within 48 hours should be laundered before reusing.

There has been much concern over the adverse reactions resulting from systemic adsorption of lindane. In most instances, these adverse reactions resulted from misuse of the drug, for example, excessive amounts to infants and small children.<sup>24-26</sup> The above guidelines for therapy reflect these concerns by advocating therapies other than

lindane for small children and pregnant women. Other precautions that can be taken to assure the safe use of lindane include avoiding hot baths before use; leaving the medication on for no more than 8–12 hours; and using less than a 1% concentration on excoriated skin.<sup>25</sup> Physicians should explain to their patients the possible side effects resulting from misuse, and should further insure the safe use of lindane by prescribing just enough medication to allow a single application; refills should not be provided.<sup>26</sup>

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# Advances in Renal Transplantation

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Cadaveric renal graft survival at one year has improved 20%-25% since 1978, due in large part to the introduction of new immunosuppressive agents, improved antigen-matching techniques, and pre-transplant blood transfusions, all of which reduce rejection, and, to reduce infection, the development of rapid diagnostic methods and tests to detect excessive immunosuppression.

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**R**ENAL transplantation involving living, related donors has always enjoyed success. HLA-A and B locus antigen matching has helped select out siblings with a two-chromosome match; the result is a graft success rate of 95% at one year, with organ recipients receiving imuran and prednisone. Even one-chromosome matches—that is, parent-child transplants—enjoy a graft success rate at one year of up to 75%. Mortality with living-donor allografts is low, between 2% and 10%.

With cadaveric renal transplants, we have been much less successful. Until 1977, the one-year survival for cadaveric grafts was only 35%-55%, and to a large extent this was attributable to aggressive immunosuppression with imuran and prednisone. Chronic rejection and hypertension resulted

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in the loss of about 5% of grafts each year. Matching for HLA-A and B locus antigens in the early 1970s appeared to play but a minor role in successful renal grafting. Patient mortality with cadaveric transplants was high before 1977, ranging from 10% to 25%, with deaths principally the result of excessive immunosuppression.

Our experience with living-donor transplants has shown us that matching for the sixth chromosome is more important to graft survival than matching for

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See also the editorial on page 189.

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the HLA-A and B locus antigens and that a chromosome match reduces the amount of immunosuppression required by the organ recipient. The less aggressive the immunosuppression, the better the patient survival rate.

Cadaveric renal transplantation faced two major challenges in the 1970s—how to prevent rejection in order to improve graft survival, and how to achieve better regulation of immunosuppression in order to reduce patient morbidity and mortality from post-

transplant infections. Significant advances have come on both fronts since 1978, and we feel that cadaveric transplantation has entered a new era. Better control of rejection and infections has improved graft survival at one year by fully 20%-25% and reduced patient mortality to less than 8%. Several scientific developments have brought us closer to our goal of tailoring and monitoring each patient's immunosuppression so that it prevents rejection but does not render the patient overly susceptible to infection.

### Cyclosporine

Cyclosporine is an antibiotic which offers the hope of a major breakthrough in modifying the immunological relations between transplant recipients and their new organs.<sup>1</sup> This drug may be the prototype of an entire new generation of immunosuppressants. A cyclic 11-amino acid compound produced by the fungus *Tolypocladium inflatum* Gams, cyclosporine was initially developed as an antifungal agent. However, when the drug was given to rodents with fungal infections, the animals died, and death was found to be attributable to excessive immunosuppression. Subsequent studies have shown that cyclosporine specifically and reversibly inhibits T lymphocytes but has no effect on myeloid cells, including B lymphocytes. The drug is not lymphocytotoxic. It appears to suppress lymphocyte function at an early stage of T-lymphocyte activation, leading to inhibition of interleukin-2 production. Additionally, it seems specifically to inhibit preactivated cytotoxic T cells, as addition of interleukin-2 to cyclosporine-treated cytotoxic T cells will bring about their activation; in contrast, interleukin-2 can induce activation of cyclosporine-treated B cells. Of importance, cyclosporine has no effect on T cells previously activated as a result of antigen exposure.

Graft survival at one year was enhanced by an average of 20% with cyclosporine. Initially it was felt that patients would require fewer steroids with use of cyclosporine, but when cyclosporine dosages were reduced from 25 mg/kg/day to 15 mg/kg/day to minimize the risk of lymphoma, prednisone doses for cyclosporine-treated patients were set at levels comparable to those for patients on conventional immunosuppressive regimens.

There are certain problems associated with cyclosporine. Nephrotoxicity occurs in fully two-thirds of patients on cyclosporine and is manifested clinically in one of two ways, either as acute elevation of serum creatinine during the initial three months posttransplant or as chronic elevation of serum creatinine (2.5 mg/dl) at six months to one year

posttransplant. Both forms of nephrotoxicity can be difficult to distinguish from rejection of the graft. However, patients on cyclosporine rarely experience graft swelling, fever and oliguria during rejection episodes. Rather, rejection in cyclosporine-treated patients presents as a mild acute elevation in serum creatinine without oliguria.

As we lack an immunological assay to confirm rejection episodes, we have had to rely on renal biopsy. A diagnosis of rejection can be made with confidence if the biopsy specimen shows an obvious perivascular lymphocyte infiltrate with interstitial edema and inflammation. Similarly, a biopsy specimen demonstrating minimal inflammation is compatible with a diagnosis of cyclosporine nephrotoxicity. However, as is more commonly the case, one sees on biopsy a mild to moderate interstitial infiltrate with no perivascular lymphocyte inflammation. Such a biopsy specimen is nondiagnostic, compatible with both nephrotoxicity and rejection.

Another diagnostic tool helpful in differentiating rejection and nephrotoxicity is measurement by radioimmunoassay of 12-hour plasma trough levels of cyclosporine. A plasma trough level of more than 400 ng/ml is compatible with nephrotoxicity, although rejection occasionally is associated with such high levels. Conversely, trough levels of less than 50 ng/ml almost always indicate rejection resulting from inadequate dosages of cyclosporine. It is not uncommon, however, that we see a patient with an acute elevation in serum creatinine, normal therapeutic levels of cyclosporine (80-200 ng/ml), and a nondiagnostic renal biopsy. In such a situation, one must rely on one's experience, and clinicians usually choose to treat the patient for presumed rejection, as a delay could mean that a rejection problem could become irreversible. If the patient's serum creatinine remains elevated after three or four days of increased steroid therapy for rejection, the patient should then be treated for nephrotoxicity and started on a lower dose of cyclosporine so that his therapeutic level of the drug is reduced.

Distinguishing chronic rejection from chronic nephrotoxicity can be extremely difficult. We manage chronic nephrotoxicity by reducing the patient's dose of cyclosporine, and in certain instances we give the patient the drug on alternate days so as to maintain therapeutic levels of 60-130 ng/ml. Some investigators have successfully managed chronic cyclosporine nephrotoxicity by switching patients to conventional therapy, i.e., imuran and prednisone, at two or three months posttransplant.

Another problem with cyclosporine is its variable bioavailability. A hydrophobic compound, the drug is very lipid-soluble. After oral ingestion, anywhere from 1% to 67% of the drug is absorbed. Diminished absorption is the rule in all patients up to three or four days postoperatively and in diabetic patients, usually as a result of decreased gastric emptying. Increased absorption can occur several days post-transplant because of increased enterohepatic recirculation. As the drug is highly lipophilic, it is first taken up by the body's lipid tissues. Once these tissues are saturated, the same dose of cyclosporine results in higher plasma levels of the drug. Because cyclosporine is to a large extent metabolized by the liver and excreted via the biliary transport system, any drugs that interfere with the metabolic pathway (P450) or the biliary transport system will affect plasma cyclosporine levels. For instance, both erythromycin and cimetidine compete with cyclosporine for P450 and so can bring about an increase in circulating cyclosporine levels. The antifungal agent ketoconazole interferes with biliary transport and thus can lead to higher plasma levels of cyclosporine, while phenylhydantoin, phenobarbital, and rifampin all increase P450 levels in the liver and can thereby accelerate removal of cyclosporine. Because of the interaction of cyclosporine with other drugs, its variable absorption, and its tissue-saturation effects, we insist that patients on this drug have their plasma drug levels checked frequently well into the posttransplant course. In addition, patients on cyclosporine should not be given trimethoprim-sulfamethoxazole, amphotericin, and nonsteroidal antiinflammatory agents, for these drugs can potentiate cyclosporine nephrotoxicity.

Contrary to expectations, cyclosporine therapy has not affected the nature or reduced the incidence of posttransplant infections. This may be due in part to the concomitant use of steroids. The incidence of lymphomas with the lower doses of cyclosporine is about 1%. There is a strong association between these polyclonal lymphomas and Epstein-Barr virus (EBV) infections, especially in those transplant recipients who have a cyclosporine-induced deficiency of EBV-specific cytotoxic T cells.

### **HLA-DR Typing**

It became apparent in the mid-1970s that there is another gene locus on the sixth chromosome which gives rise to HLA antigens, but antigens of a molecular configuration and weight different from those of the classic HLA-A and B antigens. The new gene locus is known as HLA-DR. Of the gene loci present on the sixth human chromosome, it is

unclear which are important in transplantation, the HLA-A and B genes, the HLA-DR genes, some other, as yet undetermined gene loci, or a combination of HLA-A, B, and DR genes.

Before the HLA-DR antigens were discovered, matching for the HLA-A and B antigens had played only a minor role in contributing to cadaveric renal graft survival. Since the late 1970s, there have been several well-controlled, single-center trials in Europe, Canada and the United States in which cadaveric transplants were matched for either HLA-DR antigens or HLA-A and B antigens.<sup>2</sup> Data from these trials show that matching for HLA-DR antigens contributes significantly to cadaveric graft survival. To date, no large studies have been done of transplants matched for both HLA-DR and HLA-A and B antigens.

The information on HLA-DR antigen matching is exciting. This gene locus is not as polymorphic as the HLA-A and B loci, although it may turn out to be quite complex, consisting of at least three gene subloci. Thus far, however, since only 12 different HLA-DR antigens have been identified, matching for these antigens is much easier than matching for HLA-A and B antigens.

It is important to mention here the findings of two UCLA investigators, Drs. Opelz and Terasaki,<sup>3</sup> who led an international workshop in which all centers studying matching for HLA-DR or HLA-A and B antigens participated. In their study, Opelz and Terasaki, departing from the earlier studies' methodology only in the typing reagents used, found that matching for HLA-DR or HLA-A or B antigens did not affect graft survival. As a result of this most recent study, the role of HLA-DR matching in cadaveric transplantation remains controversial. However, the positive results from the several single-center studies have prompted many transplant centers to use HLA-DR antigen matching in the selection of cadaveric donor organs.

### **Pretransplant Blood Transfusions**

The role of pretransplant blood transfusions in enhancing survival of cadaveric renal grafts is more clear-cut than that of HLA antigen matching. For patients who receive five or more blood transfusions before transplantation, graft survival in the first year is enhanced by at least 20%, a finding confirmed by retrospective and prospective data obtained from both single- and multicenter studies. Any type of blood product, whether whole blood or packed, washed or frozen cells, exerts a positive influence on graft survival, but, at present, we do not know precisely why or how this is the case.

There are two possible explanations. First, blood products may induce immune suppression by triggering formation of antiidiotypic antibodies or generation of T-suppressor lymphocytes. Second, transfusions may select out those prospective organ recipients who would have fared badly after transplantation and rejected their grafts. Subsequent to blood transfusions, about one-fourth of patients develop variable amounts of antibody to HLA antigens. Transplants are not done in these so-called "high responders," persons whose serum antibodies react to donor HLA antigens; they might well do poorly posttransplant. We have preliminary evidence to support the first hypothesis. In addition, high responders who receive grafts once their antibody levels decrease have the same success rate as other transplant recipients.<sup>4</sup>

Of course, blood transfusions are not without risk, particularly the risk of sensitization to HLA antigens, which occurs in fully 20%-30% of patients, and the possibility of infection with a virus such as hepatitis B, cytomegalovirus, or HTLV.

### Posttransplant Infections

Infection is the major cause of morbidity and mortality following organ transplantation. Among University of Virginia patients who underwent renal transplantation and were immunosuppressed with imuran and prednisone, 30% developed pulmonary infections, 30% experienced urinary tract infections, 12% had wound infections and 7% developed hepatitis. The pulmonary infections in these patients were most frequently caused by cytomegalovirus, bacteria, and *Legionella*; fewer than 5% of all pulmonary infections were due to opportunistic fungi or *Pneumocystis*. Deep wound infections in patients here were usually due to gram-negative urosepsis and breakdown of the vesicoureteric anastomosis. Cytomegalovirus was the most common cause of hepatitis.

Until recently, the most efficacious means of establishing the diagnosis of posttransplant pulmonary infections was the open lung biopsy. Now, however, we have another procedure, bronchoalveolar lavage, which has been shown in two studies to be useful in providing rapid, accurate diagnosis of opportunistic lung infections.<sup>5</sup>

Diagnosis of excessive immunosuppression or cytomegalovirus infection can be facilitated by serial measurement of T lymphocyte helper/suppressor ratios.<sup>6</sup> Worsening renal function in the setting of excessive numbers of suppressor T lymphocytes may be secondary to cytomegalovirus-induced glomerulopathy; it is unusual to see rejection in this

setting. Additionally, cytomegalovirus may be another diagnosis to consider when patients who are on cyclosporine develop problems, for distinguishing cyclosporine nephrotoxicity from cytomegalovirus infection can be difficult, even with renal biopsy. In any event, of course, therapy would be the same—that is, decreased doses of cyclosporine in the presence of too many suppressor T lymphocytes.

### Conclusion

The future of cadaveric renal transplantation is promising. We are now trying to reduce the incidence of cyclosporine nephrotoxicity by taking patients off this drug and starting them on imuran and prednisone at three months posttransplant. An important area for future investigation will be development of immunological assays to assist us in precisely tailoring patients' immunosuppression and in diagnosing rejection. Studies are underway to determine the optimal amount of, and best technique for, pretransplant blood transfusions so that we can minimize the incidence of sensitization to HLA antigens and afford recipients maximum protection against rejection. Attempts are being made now to treat difficult rejection episodes with monoclonal antibodies to T lymphocytes, with some success.<sup>7</sup> The full effects of these advances on the long-term survival of transplant recipients and cadaveric renal grafts remain to be seen.

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# Shock-Wave Lithotripsy for the Removal of Kidney Stones

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**E**XTRACORPOREAL shock-wave lithotripsy (ESWL) is a revolutionary non-surgical technique for the removal of calculi in the kidney or upper two-thirds of the ureter.<sup>1-5</sup> The stones are pulverized by focused shock waves from a lithotripter, and the small particles are spontaneously washed out of the urinary tract.

The technology and the technique resulted from a ten-year research program by Dornier GmbH by West Germany and Professors E. Schmiedt, C. Chaussy and W. Brendel of the Department of Urology, Ludwig Maximilian University, Munich. Originally, Dornier was investigating shock wave damage to satellites struck by micrometeorites and supersonic aircraft struck by raindrops. Investigations strayed into the medical applications of shock waves and demonstrated that shock waves would fragment kidney stones while safely passing through tissue submerged in water. Preliminary in vitro and animal studies by the German investigators demonstrated the safety and efficacy of ESWL.

The University of Virginia Medical Center was one of six facilities chosen by the Food and Drug Administration to test the \$2 million machine in this country. At all locations, excellent results were obtained, and FDA approval was obtained in December 1984.

## Technique

The shock waves are produced by the electrical discharge (18 to 25 KV) of an underwater electrode. The shock waves are collected and focused by a metal reflector beneath the electrode. Most of the shock wave energy is focused on a circular area 2 cm in diameter, located 23 cm above the electrode. The pressures generated at this second focal point

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are on the order of one kilobar (one billion dynes per cm<sup>2</sup> or approximately 15,000 lbs per in<sup>2</sup>).

The patient is strapped onto the operating platform of the lithotripter and submerged in water up to the chest so that the shock waves can enter and exit the patient without crossing a tissue-air interface. A biplane fluoroscopic unit, capable of accurately visualizing 3- to 4-mm calculi, is used to locate and center the patient's stone in the focus of the shock waves.

The spark discharge is triggered by the R wave of the electrocardiogram. The actual discharge occurs during the refractory period, thereby avoiding cardiac arrhythmia. A single treatment session consists of up to 2,000 discharges, although 100 or 200 discharges may be sufficient to pulverize a brittle pelvic stone.

A few shock waves can be tolerated without anesthesia, but the number of discharges needed to fragment a kidney stone requires the use of general or regional anesthesia. Epidural anesthesia has been used in the vast majority of patients treated at the University of Virginia. A treatment session lasts 30 to 60 minutes, and it is frequently possible to pulverize bilateral calculi during a single treatment.

## Results

In our experience at the University of Virginia with 213 patients treated with ESWL in the first five months of operation, approximately half of the patients required no pain medication after therapy. Acetaminophen (Tylenol®) was sufficient for many of those who required medication. Of the 213 patients, 20% required a second treatment to achieve fine pulverization of the stone material, and 10% required assistance in passing fragments by retrograde catheterization of the ureter, ureteral meatotomy, or percutaneous nephrostomy. Seventy percent have been discharged the day after therapy, after spending only two nights in the hospital. Most patients can return to work immediately after discharge. Patients pass fragments for about 30 days.

As of December 1984 there had been no deaths attributed to ESWL in over 6,000 patients treated to date. In Germany there have been two deaths several days after therapy, not thought to have been associated with ESWL. One patient with a history of three previous myocardial infarctions later died of a myocardial infarction. The second death was caused by sepsis occurring several days after treatment as a result of ureteral obstruction by stone fragments.<sup>5</sup>

At the University of Virginia we have had no complications from ESWL. There have been five

perirenal hematomas in lithotripter patients in Germany, related to the use of minidose heparin. In the United States one case of perirenal hematoma occurred after the preoperative use of aspirin, and another case has been reported in which the patient denied the use of aspirin.

ESWL should not be confused with ultrasonic lithotripsy. The shock waves used in ESWL have a single pressure spike with a very steep onset and a gradual relaxation, and are a composite of both low and high frequencies. Ultrasonic waves have a sinusoidal pressure variation and a well-defined high frequency. Since biological tissue attenuates high frequencies more than low frequencies and since ultrasonic waves are about 1,000 times less powerful than shock waves, ultrasonic waves must be delivered directly to the stone. Shock waves, on the other hand, being more powerful and of mixed frequency, can be generated outside the body and focused on a small area with less attenuation. Unlike ultrasonic lithotripsy, shock wave treatment is non-invasive.

ESWL is clearly superior to percutaneous lithotripsy or open surgery because it is safer, more frequently successful, causes significantly less morbidity and allows a more rapid return to normal life.

### Summary

What does the future hold? We expect that in the future most upper ureteral and renal calculi will be treated by ESWL, while lower ureteral stones, which are not susceptible to ESWL, will be extracted by stone baskets with or without the assistance of ureteroscopy. Within two to four years we expect there will be enough lithotripters available to treat all kidney stone patients.

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## Percutaneous Stone Removal in a Community Hospital

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**P**ERCUTANEOUS nephrostomy and subsequent percutaneous nephrolithotomy is supplanting open renal surgery as the procedure of choice at community hospitals to remove both renal and ureteral stones. Successful stone removal exceeds 95% with a minimum number of complications.<sup>1</sup> The procedure can be performed as one step under local or general anesthesia and the usual hospital stay is only one or two days.<sup>2</sup>

### Materials and Methods

We perform the nephrostomy and nephrolithotomy in a single step in the operating room. This allows for a combined effort by both radiology and urology. Average operating room time is one hour.

An 8 French cone-tipped catheter is placed cystoscopically high in the ureter and used both to dilate and opacify the renal collecting system. The patient is placed in a prone oblique position with the side of interest up (approximately 30 degrees).

The flank is prepared and lidocaine hydrochloride (Xylocaine) is infused if local anesthesia has been selected. We prefer local over general anesthesia because of lower risks; also, the patient is able to help with changes in position during the procedure. The collecting system is opacified with contrast medium (Conray® diluted 1:1 with normal saline). An 18-gauge needle with central stylet is directed into the collecting system under fluoroscopic guidance. By removing the stylet and injecting saline through the ureteral catheter, the needle position can be checked to insure the tip is within the renal collecting system. If appropriately placed, saline will slowly reflux from the needle hub during injection.

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**Table 1. Comparison of Costs of Percutaneous and Open-Surgery Stone Removal in 20 Patients.**

	Percutaneous Stone Removal	Pyelolithotomy/ Uretero- lithotomy
Total length of stay (days)	5	8.6
Postoperative stay	3.4	6.6
Total hospital cost	\$3,974	\$3,374
Operating room cost	\$ 860	\$ 444
Time off from work postoperatively	1 week	6 weeks

A .035- or .038-inch guidewire (Bentson taper) is introduced and directed down the ureter. Positioning the guidewire in the ureter provides stabilization for subsequent dilation of the nephrostomy tract. Ten ccs of 1%-2% Xylocaine is injected into the collecting system via the puncture needle to reduce discomfort associated with introduction of the guidewire. Dilation of the nephrostomy tract is performed using progressively larger dilators to 24-30 French as determined by the size of the stone extraction device selected.<sup>3</sup>

Once dilation is achieved, a working sheath is inserted and the last dilator removed. A rigid cystoscope or flexible choledochoscope/bronchoscope can be inserted to grasp and extract a small stone<sup>4</sup> or an ultrasonic lithotripter can be inserted to crush or disintegrate larger stones.

Following stone removal, a radiograph is performed to evaluate for total stone removal and free flow of contrast into the bladder. A 24 French catheter (Robinson) is left in place along with the guidewire for 24 hours.

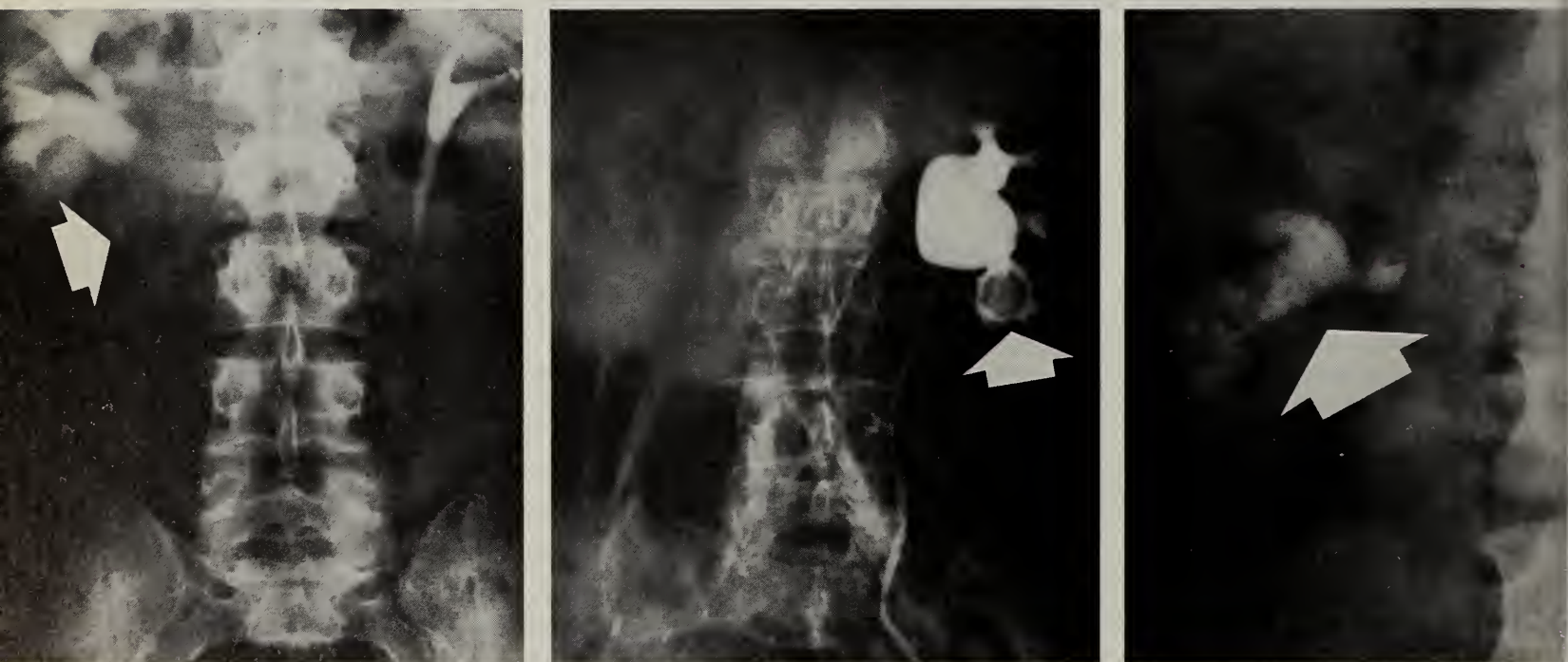
## Discussion

At the Lewis-Gale Hospital and Clinic, we have used this method in over 40 cases to remove ureteral, pelvic and staghorn calculi (Fig. 1). All stones attempted have been removed, with no significant complications. It should be noted that all patients undergoing nephrostomy experience transient hematuria; when small in quantity, this is not considered a complication.<sup>5</sup> Our success and complication rate compares favorably with other series, where success is typically greater than 95% and complications occur in less than 3%-5% of cases attempted.<sup>1,6</sup>

Careful selection of calyceal entry site during the initial percutaneous nephrostomy is important in minimizing difficulty during stone extraction.<sup>7</sup> If stones are present in multiple calices, one should be careful to choose an approach that allows access to all stones or multiple entries will be necessary. More than one nephrostomy-nephrolithotomy site can be created at a single sitting with little increased risk, however.

The most frequent complication is bleeding.<sup>8</sup> This is usually self-limiting but may occasionally require transfusion. Nephrectomy has been reported in a case where bleeding was not controlled. Other complications include pneumothorax when a nephrostomy site above the 12th rib is used. Urinomas may result from perforation of the renal pelvis or ureter.

We compared the cost of hospitalization and length of stay of the 20 patients treated percutaneously to a control group treated by open nephro-



**Fig. 1.** Arrows point to stones removed percutaneously from proximal ureter (left); calyx (center); and, from the collecting system, a staghorn calculus (right).

and uretero-lithotomy. As Table 1 makes clear, percutaneous stone removal is about 17% more expensive than open renal surgery at Lewis-Gale Hospital. This is in spite of the fact that many of our percutaneous procedures, especially the most recent ones, have been under local anesthesia and in one stage.

The added costs arise from the use of the C-arm fluoroscopy unit and the multitude of expensive disposable ureteral catheters and dilators used during the procedure itself. As our experience has grown, the length of time spent in the operating room has decreased markedly; uncomplicated stones can now usually be removed in 40-50 minutes as a one-stage procedure. Even with this improvement in technique, the overall cost in the hospital is still slightly higher than open surgery.

Real savings occur, however, in increased patient safety by using local anesthesia and by returning the patient to home life or work much faster than was previously feasible. As Table 1 shows, our experience with percutaneous stone removal instead of open surgery has resulted in substantially reduced hospital stays, and most of our patients have returned to work after a week of convalescence.

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## Evolution of Emergency Services in Central Virginia

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THE General Assembly of the State of Virginia enacted legislation in 1968 to reduce fatalities and serious disabilities resulting from accidents and medical emergencies by authorizing the State Department of Health to upgrade the emergency medical care system in Virginia. Until that time, the volunteer squads had only to meet self-imposed standards. One of the stated responsibilities of the State Department of Health was to initiate licensing procedures for operation of ambulances, to regulate the equipment and supplies carried on ambulances and to certify the qualifications of ambulance attendants. The General Assembly created an Advisory Committee on Emergency Services to assist in developing minimum standards for these new licensing and certification requirements. Dr. Leslie E. Rudolf of the University of Virginia School of Medicine served as chairman of this Advisory Committee until 1982, when Dr. John P. McDade of Alexandria assumed this leadership role.

Cognizant of the need for improved emergency services in our country, the Robert Wood Johnson Foundation decided in the early 1970s to authorize a nationwide competitive program to encourage communities to develop regional emergency medical systems.<sup>1</sup> The program received widespread attention and 251 applications for grants. In 1974 a grant was awarded to the University of Virginia School of Medicine to implement an emergency medical system in the Thomas Jefferson Planning District 10. The grant program, ending in 1977, focused on access of the public to the emergency medical system by the 9-1-1 telephone number, training of rescue squads and the development of a radio

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communication system for rescue squads in this five-county region. The number 9-1-1, designated for public use throughout the United States to request aid from fire, police or rescue agencies,<sup>2</sup> had already been installed in Nelson County in 1969 after Hurricane Camille. By late 1976 Greene and Fluvanna counties had the 9-1-1 service. Installation of this system for the more populated regions of Albemarle County and the City of Charlottesville was accomplished in December 1984.

In 1974, the minimum requirements for certification of ambulance attendants was the American Red Cross Advanced First Aid course, which was generally considered inadequate for those who were required to render care and transportation to persons who were seriously ill. The Department of Transportation's National Highway Safety Administration contracted to develop a training course for rescue personnel that prepared them to care for the sick and injured using basic life support techniques.<sup>3</sup> This 81-hour training program was pilot-tested at Piedmont Virginia Community College in 1975, after which it was offered to the other rescue squads in the region. Successful completion of the course allowed the rescue squad personnel to be certified as emergency medical technicians-ambulance (EMT-A). In 1983 this training program became the minimum training requirement for rescue squad personnel for certification by the Department of Health, and more than 33,000 Virginians have now been certified as emergency medical technicians-ambulance. A radio communications system was designed and implemented that allowed trained rescue squads to communicate with the University of Virginia Medical Center and Martha Jefferson Hospital, as well as with each other.

The Thomas Jefferson Emergency Medical Council was created to plan and coordinate the emergency medical services in PD 10, which includes Albemarle, Greene, Louisa, Fluvanna and Nelson Counties. Membership in the council consists of consumers, local government officials and health professionals (i.e. physicians, rescue squad personnel, nurses etc.). This council provided an important mechanism for public education advocating the regional approach to emergency medical systems development.

In 1973 President Nixon signed the Emergency Medical Service Systems Act (EMSS). Its purpose was to decrease the unacceptably high statistics of death and disability resulting from medical and accidental emergencies. It authorized \$185 million dollars over three years and provided for the awarding of grants and contracts for development of

emergency medical systems in the United States. The passage of this act provided the mechanism and funds for communities across Virginia to develop regional emergency care delivery systems. In addition, the legislation for the first time established emergency medical care as a national health problem and identified the lead agencies at the federal level (Department of Health, Education and Welfare) and the state level (State Department of Health) to coordinate the establishment of regional emergency care systems.

The success of the Thomas Jefferson Planning District in developing its regional system served as a catalyst for the development of other such systems in Central Virginia. The central Shenandoah Council was formed in PD 6, incorporating Rockingham, Augusta, Rockbridge, Bath and Highland Counties. In PD 7, the Lord Fairfax Council includes Shenandoah, Frederick, Clarke, Warren and Page Counties. Four counties make up the Rappahannock Council in PD 16—Stafford, Spotsylvania, King George and Caroline. And the five counties of PD 9—Fauquier, Rappahannock, Culpeper, Orange and Madison—comprise the Rapidan-Rappahannock Council's area.

To work together and to assist each other in the planning and implementing of emergency medical activities, these councils formed the Virginia Federation of Emergency Medical Service Councils. The Federation applied for federal funds and grants were awarded to the Federation to develop its regional system. During this period each Council developed its own plan for providing emergency medical services, sharing its accomplishments with the other councils in the region. Through this process of shared resources, an integrated system with training goals, treatment protocols,<sup>4,5</sup> transfer agreements and evaluation criteria emerged.

In 1978, the legislature of Virginia mandated that the Department of Health designate regional emergency medical systems. The Virginia Federation of Emergency Medical Service was designated as one of eight regional systems in the state. The legislation also indicated that this regional council as well as others must review all applications for state funds by emergency medical agencies within their region prior to submission to the Advisory Committee for further review and comments. The recommendations of the regional councils would then be considered by the Department of Health.

With the maturation of these systems, it became evident that out-of-hospital interventions by rescue squad personnel with medications and special equipment were necessary to save lives of victims

of accidental injuries or medical emergencies. As a joint effort between physicians and nurses throughout Virginia in collaboration with Manpower and Training Task Force of the Advisory Committee on Emergency Services chaired by Dr. Forest D. McCoig of the Hampton/Newport News area, training programs were developed that prepared the rescue squads to manage critically ill or injured patients using advanced life support techniques.<sup>6</sup>

Today, there are three advanced training programs for rescue squads certified by the Virginia Department of Health. The objectives of the emergency medical technician-shock trauma (EMT-ST) training program is to have the student understand the pathophysiologic consequences of significant traumatic injuries and selected medical emergencies as well as to teach the appropriate therapeutic intervention to stabilize the patient's condition. The course was developed utilizing Modules I, II, III, V, VI, VII and X of the National Training Course for emergency medical technicians of the United States Department of Transportation.<sup>7</sup> The emergency medical technician-cardiac (EMT-C) course focused on emergency care of the cardiac patient and taught the student to perform cardiac monitoring and cardiac defibrillation. The emergency medical technician paramedic course provided the highest level of training for pre-hospital personnel. Students who completed the EMT-ST and EMT-C courses had to pass examinations prepared by the Department of Health in order to be certified to provide this level of care under the supervision of physicians at the hospital base station. The tests of National Registry of Emergency Medical Technicians were used to evaluate the competency of the rescue squad personnel who completed the paramedic course.

Cognizant of the importance of this regional approach to care, Gov. John Dalton in 1981 directed Virginia's Department of Health to designate regional trauma centers.<sup>8</sup> Hospitals designated as trauma centers had to make the commitment detailed in the American College of Surgeons' trauma center criteria to develop a responsive program that provides specialized care to the trauma victim. Its designation as a trauma center had considerable influence on the University of Virginia Hospital. There was a positive change in attitude toward the trauma patient by the entire hospital staff, especially surgical and emergency personnel but, including hospital administrators, teachers, scientists and support personnel, and gave impetus to the in-house reorganization necessary to develop a highly skilled multidisciplinary trauma service.

The General Assembly enacted legislation in 1983 that provided additional funds for emergency medical services through a fee of one dollar charged at the registration of a motor vehicle.

Thus considerable improvements have been made in the last 20 years in the delivery of emergency medical care in Central Virginia, with major advances being the result of a sound integration of all the essential components of an emergency medical system directed toward delivering optimal care to the patient from the time of injury until rehabilitation. Because of the typical non-medical setting of most emergency events (i.e. roads, home), the utilization of rescue squad personnel as physician extenders is an essential component of the system. These services must be provided under physician supervision, using radio communication, and must meet the systems standards for patient care as established by a regional emergency medical council. The operation of the system must be guided by a carefully designed evaluation of its effectiveness,<sup>9</sup> which has the potential for boundless new scientific discovery. Continued federal and state support will be needed to ensure that the system will grow and become increasingly effective.

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## Five more lithotripters sought

VIRGINIA'S lone lithotripter, the one described by Drs. Gillenwater and Jenkins in their foregoing article, will likely soon have company. In progress through the state's certificate of need system are five applications to install lithotripters in Virginia. One was filed by a group of ten urologists in Danville led by Dr. Irving Melnick. One came from Medical Center Hospitals in Norfolk. Three were initiated in Richmond—by Johnston-Willis Hospital, the Medical College of Virginia, and an alliance of 22 urologists headed by Dr. C. M. Kinloch Nelson.

The door to these applications was opened when the Food and Drug Administration gave its seal of approval to the new technology. In their editorial opposite, Drs. Koontz, Smith and Lee suggest a need for 100 lithotripters in the United States, and when she announced the FDA's approval, Margaret M. Hechler, Secretary of Health and Human Affairs, predicted that in 1985 alone 20-30 machines will be sold in this country. How many will wind up in Virginia depends on the fate of the pending CON applications, but some extension of lithotripter availability in Virginia can be expected.

Danville, for instance, is the largest metropolis in an area notoriously high in kidney stone incidence; like the crippled converging on Lourdes, stone sufferers flock to Danville's urologists. A lot of them head for the Danville Urologic Clinic, of which Dr. Melnick is corporate president. Not only does the Clinic's patient load suggest strong potential for lithotripter use, but Dr. Melnick forecasts that at Danville Memorial Hospital, where the machine would be installed, lithotripsy can be delivered at "about one-half" the \$9,000 charged by the University of Virginia.

Moreover, the Clinic's physicians are not seeking the lithotripter for their exclusive use, Dr. Melnick emphasizes. Their intent is to serve the area, he says, and to that end they have invited all the urologists within a 100-mile radius to use the lithotripter for their patients.

The same hospitality characterizes the expressed goal of Dr. Nelson and his cohorts in Richmond. Their CON application describes a

free-standing unit where shock-wave lithotripsy would be accessible to all hospitals and urologists in Richmond and such outlying communities as Petersburg and Hopewell. "There's no sense in duplicating this expensive technology," Dr. Nelson asserts. (In 1983 Dr. Nelson won a certificate of need for a free-standing ambulatory surgery center; it was the first and, to date, the last to be granted to a group of Virginia physicians.)

The FDA's approval of shock-wave lithotripsy also opened the door to reimbursement, which was not easy to come by when Drs. Gillenwater and Jenkins began accepting patients. By the end of 1984, however, The Travelers, Aetna and Metropolitan were reimbursing patients whose policies filled the bill, and Blue Cross and Blue Shield of Southwestern Virginia had approved coverage and was reimbursing. Blue Cross Blue Shield of Virginia has also approved coverage, but as this was written the rate of reimbursement was still under discussion with the University of Virginia Health Foundation.

Medicare officials are expected to follow the FDA's lead and authorize reimbursement. Indeed, Secretary Hechler noted in her speech that she had asked for prompt action by the federal board that approves therapies for Medicare coverage. After that, officials say, state and federal plans for the poor, such as Medicaid, will follow suit, as will additional private insurers.

Does the lithotripter shut the door on removal of kidney stones by conventional surgery or by the new percutaneous procedures described by Drs. Jones and Mathis in the preceding pages? Not at all, say Drs. Koontz, Smith and Lee; all three procedures have important urologic roles to play, depending on the patient's problem. But just as percutaneous stone removal began supplanting open surgery a few years ago, the shock-wave treatment has now begun to supplant percutaneous techniques. Dr. Melnick estimates that for 80 of every 100 patients who have undergone percutaneous stone removal at the Danville Urologic Clinic, shock-wave lithotripsy might well have been the treatment of choice.

—ANN GRAY

# VIRGINIA MEDICAL EDITORIAL

## Giant Steps Forward in Kidney Disease

**T**HREE PAPERS in this issue present data on recent advances in two important areas of kidney disease, transplantation and stone removal. In addition to scientific, morbidity, and mortality improvements, these new techniques offer the equally important potential of cost savings.

The first paper by Dr. Lobo concerns advances in renal transplantation and reviews the improvement in cadaveric renal transplants with better antigen-matching techniques, pre-transplant blood transfusions, better management of post-transplant infections, and the use of newer immunosuppressive agents, such as cyclosporine. The well-selected recipient can now expect low mortality and morbidity, a shortened hospital stay, better life expectancy, and, therefore, overall lower costs for his or her medical care.

Following an initial outlay of between \$18,000 and \$27,000, the yearly cost for followup and immunosuppression should be around \$4,000. The cost of chronic dialysis is up to \$20,000 per year. The transplant recipient may return to a full-time job, and, to quote the late David Hume, "The transplant recipient may return to full employment and help take care of several patients on chronic renal dialysis." Renal transplantation has truly come of age.

The next two papers, one on shock-wave lithotripsy by Drs. Gillenwater and Jenkins, and the other on percutaneous stone removal by Drs. Jones and Mathis, deal with advances in the management of urinary tract calculi. As one reads these two papers, they seem to be competitive. We would submit that both are advances in technology and instead complement each other.

Both percutaneous stone removal and extracorporeal lithotripsy have a place. When combined with transureteral lithotripsy, very few patients will require an open surgical procedure, but, indeed, a few patients with complicated stone problems will still require open surgery. Precise indications for these new techniques will be refined over the coming years. The extracorporeal lithotripter is an exciting innovation. The equipment has recently been approved by the Food and Drug Administration for sale and use in the United States with an expected 100 machines needed and appropriately located. Virginia has one machine in Charlottesville and probably needs only two or three machines for the entire state, until the use per machine reaches 300-400 cases per year. One can expect jockeying for position to obtain a certificate of need.

It would appear, at this time, that the patient with a kidney stone that is less than two centimeters in diameter, easily seen on an x-ray monitor (i.e., calcium-containing), and without infection or obstruction is best treated by the extracorporeal lithotripter. Large compound stones with significant obstruction, and/or with a calculus or calculi in the ureter may need a percutaneous or ureteroscopic removal as the principle mode of therapy or as an adjunct to the lithotripter. A question not yet answered is whether percutaneous stone removal using an ultrasonic probe or the extracorporeal shock-wave lithotripter will result in a high incidence of recurrent or retained fragments which will require future treatment.

These advances in technology represent a revolution in the management of calculus disease of the

urinary tract. The lithotripter will be used in 75%-80% of patients requiring manipulative therapy of renal calculi. Percutaneous techniques and ureteroscopic manipulation will be used in those patients with ureteral stones that are not candidates for the lithotripter.

Open surgical procedures will be used for complications of the two aforementioned procedures but may still hold a place for the large-branched (stag-horn) calculus. Even with the giant steps that have been taken to improve the surgical management of stone disease, a final word should be said about the

medical management of calculus disease: An evaluation as to the cause of calculus disease in the individual patient, hydration, diet, and medication are not as exciting as this new technology but remain essential components of the therapy of urinary tract calculi.

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## Questions and Answers

**T**HE Virginia State Board of Medicine has recently been the object of considerable criticism, some of which may be justified. Several needs do exist. These are an increased appropriation, properly directed; a change in the table of organization; and acceleration of due process of law.

The increased appropriation is essential for the employment of more trained investigators, for the employment of two more assistant attorneys general to be assigned solely to the Board of Medicine, and in providing more support to the office of the Board of Medicine, i.e., a computer, more secretary-typists, and more space for working and filing.

There should be a change in authority as now interpreted in the table of organization. The present Virginia Code provides for a consumer-oriented Health Regulatory Commission; there is one physician member. Under the Health Regulatory Commission, there is a Department of Health Regulatory Boards, and one of these is the State board of medicine. The director of the Department of Health Regulatory Boards is not a physician. More and more power has been invested in this position, and there has been for the State Board of Medicine a sharp diminution in authority and responsibility. The duties of the director should be limited to administrative matters; he/she should not be involved in judgmental decisions regarding the impaired physician.

The increased appropriation, the monies for which will almost necessarily be derived from an increase in physicians' licensure fees, should be managed by the Board of Medicine. Physicians in Virginia would readily accept an increased licensure fee if these funds were controlled and utilized by physicians—not by bureaucrats. (At present, the Board of Medicine provides at least one-third of the

total health regulatory board budget, but much less than this amount is allotted to activities of the Board of Medicine.)

Due process of law is a major cause of the delay encountered in removing the impaired physician from practice. In order to accelerate this process, the Attorney General has recommended the establishment of a new system of administrative law judges. The State Board of Medicine would support such a concept, provided that recommendation is made by the court and final decision is made by the board. A change in the Virginia Code to allow the Board to summarily suspend a physician until formal legal action has determined the question of impairment would be an even greater aid in reducing the presently existing delays in removing the sick physician from practice.

Obviously, not too much can be accomplished without the enabling legislation; however the Board has already instituted the following changes:

1) A hotline to the health regulatory boards has been established. The number is 1-800-533-1560.

2) The name of each recipient of a "cease and desist" letter will be listed in Board Briefs.

3) The Executive Committee will conduct a periodic review of cases screened by the secretary-treasurer.

4) The president has appointed a Physicians Disciplinary Committee to coordinate with The Medical Society of Virginia program.

5) Already being scheduled are more informal and formal conferences, and there will be interim Board meetings to promote more rapid disposition of cases now under consideration.

EDWIN L. KENDIG, JR.

Condensed from a guest editorial published in the Richmond Times-Dispatch on January 8, 1985.

# VIRGINIA MEDICAL OBITUARY

## Memoir of S. D. Theogaraj 1934-1984

*By I. Kelman Cohen, MD,  
and Kenneth Olshansky, MD*

On March 26, 1984, at the age of 50, Dr. Sam Dawson Theogaraj lost his battle with leukemia.

Dawson was born on January 16, 1934, in Kuala Lumpur, Malaysia, and several years later he and his family moved to India. Dawson received his undergraduate education at the Madras Christian College and his medical degree at the Christian Medical College in Vellore. While in medical school, Dawson received the prize for the "best outgoing student" as well as having the highest ranking in surgery.

In 1964 Dawson began his plastic surgery training at the University of Pennsylvania. He was certified by the American Board of Plastic Surgery in 1966 achieving a perfect score on the exam, a unique accomplishment in the history of the Plastic Surgery Boards.

Dawson returned to his home in India in 1966 where he served as Chairman of the Department of Plastic Surgery at the Christian Medical College Hospital from 1967-1972. During these years, Dawson gained an enormous amount of experience especially in the field of cleft lip and palate, becoming an international authority.

In 1968 while on a trip to India, one of the authors had the opportunity to work with Dawson and asked him to join the Medical College of Virginia faculty when the new plastic surgery division was started in 1972. In only six years, Dawson advanced from assistant professor to full professor and became one of the outstanding members on the faculty. During Dawson's career he published over 30 scientific articles, authored several chapters for textbooks, and presented lectures and papers at more than fifty meetings.

Dawson was known and loved as a man of integrity, good humor and kindness. He had a great love for teaching and would leave all in awe with his encyclopedic knowledge. Whenever advice was needed, he was always willing to share his experience and wisdom in his unique humble way. Dawson was truly the plastic surgeon's plastic surgeon.

Dawson's dedication to his professional life was only surpassed by that to his family. The love between Dawson and his wife Janaki and two daughters Suji and Sashi was so evident during the final months of his life. Their love and support was indeed very special. We all feel the loss of a wonderful father, husband, friend and master surgeon.

Dawson, the world is a better place because of you and all who knew you are better people as a result.

## Memoir of R. S. Rixse 1947-1984

*By Thomas J. Sullivan, MD*

Dr. Robert S. Rixse, aged 37, was brutally murdered on July 2, 1984, by an assailant at his home in Alexandria. A native Alexandrian, he had practiced pediatrics and adolescent medicine in Alexandria since 1973. He is fondly remembered by close friends as Hammond High School's best 5'7" basketball player. Rob, as he was called, was T. C. Williams High School's team physician. He was active in community and civic affairs, serving on the United Way board, the Chamber of Commerce, as district chairman for the Boy Scouts and in his local PTA and civic association. Doctor Rixse completed his undergraduate education at Johns Hopkins University and received his medical degree from Duke University. He completed his residency in pediatrics at Duke and his adolescent medical fellowship at Children's Hospital in Washington DC.

Doctor Rixse is survived by his daughters, Katie, Mandy and Meg, his mother, Charlotte, and his brother, Jay.

Doctor Rixse was on the staffs of Alexandria Hospital, Fairfax Hospital, Children's Hospital and Potomac Hospital. He was an associate clinical professor of pediatrics at George Washington University School of Medicine. He was a member of the Alexandria Medical Society, The Medical Society of Virginia, and the Virginia and American Academies of Pediatrics.

Doctor Rixse will be deeply missed by his community, colleagues, and patients.

# The Psychiatric Speed Limit

How long should it take to "cure" chronic schizophrenia? How fast can a psychiatrist move a patient along a course of treatment for psychosis or a personality disorder?

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If you would like more information about the Sheppard Pratt approach to psychiatric care, please contact: Dr. David Waltos, Director of Admissions, Sheppard and Enoch Pratt Hospital, P.O. Box 6815, Baltimore, Maryland 21204. (301) 823-8200.



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**On the cover** *Art by Marc Yankus, whose collages have appeared in such leading publications as Life, Business Week, and the New York Times and have been exhibited at the Brooklyn Museum and New York galleries.*



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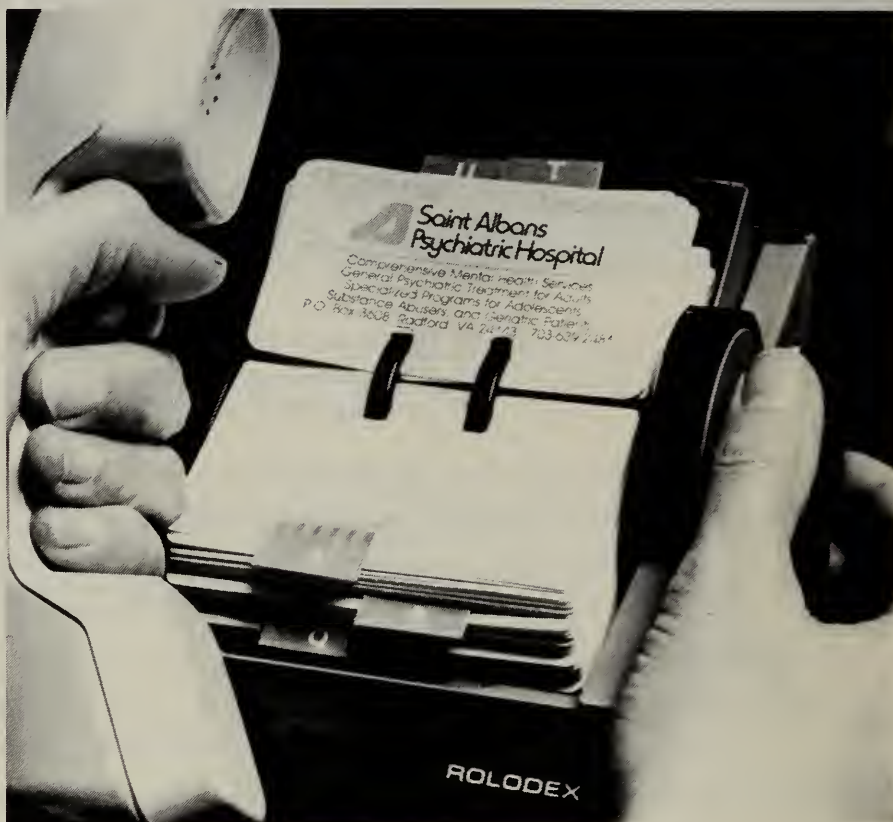
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# MEDIBYTES

## GUESTS AUGMENT MSV COUNCIL'S MAY MEETING

Special guests at the special two-day meeting of Council on May 4 and 5 at the Richmond Hyatt House will be presidents of Virginia's component and specialty societies and chairmen of The Medical Society of Virginia's committees. Dr. Harry C. Kuykendall, MSV President, invited these leaders to share the councilors' May meeting, which was extended in length so that not only Society matters but significant national issues could be discussed.

## LEARN, LUNCH AT PROGRAM ON IMPAIRMENT

Check in Friday, May 3, at the new Downtown Marriott Hotel in Richmond for a learning experience offered by the Physicians Health/Effectiveness Committee, to begin at 8:30 am with a scientific program on chemical dependence, proceed through free lunch, and wind up with a workshop for intervenors. Reserve before April 24 with Lorraine McGehee at MSV headquarters, (804) 353-2721.

## PHYSICIAN GROUP, HUMANA ENTER HMO ARENA

Two new health maintenance organizations were licensed last month by the State Corporation Commission, bringing to 16 the number of HMOs in Virginia. One was organized by a group of 14 Richmond physicians and will be marketed in the greater Richmond area as "Southern Health Services." The other is the enterprise of Humana, the big hospital corporation; it is to operate from multiple locations in the Tidewater area.

Leaders of the new physician-owned HMO, which had been gestating since 1982, include Dr. Emerson D. Farley, Jr., chairman of the board; Dr. Ronald K. Davis, vice chairman; Dr. John M. Daniel III, secretary; and Dr. Edward M. Saylor, treasurer. As this report was written, the new HMO had signed up 500 participating physicians, according to Harold J. Newman, president. It is a for-profit HMO, funded by the original shareholders and 100 limited partners; in addition, 600 limited partnerships are being offered at \$5,000 each.

Here are the 14 other HMOs now licensed to do business in Virginia. Note that two operate in both Richmond and the Tidewater area.

- In Tidewater: Blue Cross Blue Shield of Virginia (doing business as "HMO Plus"); HealthAmerica Virginia; Health Plan of Virginia ("Health First"); Optima Health Plan; United Medical Plan of Virginia.

- In Richmond: Blue Cross and Blue Shield of Southwestern Virginia ("Healthkeepers"); Blue Cross Blue Shield of Virginia ("HMO Plus"); Prudential Health Care Plan ("PruCare"); and United Medical Plan of Virginia.

- In Northern Virginia: Aetna Health Care Programs of Virginia ("Choice"); George Washington University Health Plan; Group Health Association; Kaiser Foundation Health Plan of the Mid-Atlantic States (formerly Kaiser-Georgetown Community

# MEDIBYTES

Health Plan); Network Health Plan (formerly Virginia Health Plan).

In the talking stage is an HMO of another species, one that would be the corporate venture of three state specialty societies -- Virginia Society of Internal Medicine, Virginia Pediatric Society and Virginia Academy of Family Physicians, and it could be the first HMO in the nation under the control of primary care physicians, says Thomas T. Vinson, Jr., who as executive secretary of VAFP also has the HMO coalition under his professional wing. For the coalition, Vinson reports to Dr. F. Elliott Oglesby, Sr., chairman of the joint committee that has been mulling over the HMO idea since mid-1984. At the committee's request, Vinson early this year sent to members of the three societies a survey asking for comments on the proposed HMO. Only those members in private practice were polled, a total of 1,800. Responses came back from 40% and were "extremely positive," Vinson said, with "very few" reporting they already belong to an HMO. The joint committee was to study the data, Vinson said, then decide on the next step.

State officials have no roster of preferred provider organizations in Virginia because most PPOs don't promise to deliver future services for an "up-front" payment and thus aren't subject to insurance regulations. At the federal legislative level there has been talk recently of bringing PPOs into the regulatory fold. Virginia's lawmakers early this year created a committee to study both HMOs and PPOs before extending the state's governance of either. The committee is to report to the 1986 General Assembly.

## SIGNUP RATE IS PAR FOR MEDICARE COURSE

Of the estimated 11,000 physicians with Virginia licenses to practice, 3,830 have signed participating agreements to accept assignment on all Medicare claims, say Travelers Medicare officials. That's a signup rate of about 30%, or right on the national rate announced by the Health Care Finance Administration. The rate is reported to vary in other states from 5.6% in South Dakota to 53.9% in Alabama.

The AMA has gone to court to challenge the constitutionality of the legislation that froze Medicare fees and turned physicians into "pars" and "non-pars", and The Medical Society of Virginia has endorsed that effort. For the waiting rooms of non-pars, the AMA has produced an ensemble of brochures and a poster. The message emphasizes an unchanging doctor/patient relationship and continuance of high quality care, and invites patients to discuss the new law and fees. For a poster and up to 100 brochures, send a request on your letterhead to Virginia Medical, 4205 Dover Road, Richmond VA 23221.

## COMING ATTRACTIONS

Va Med's May issue takes you inside the morgue with case reports by Chief Medical Examiner David K. Wiecking. Also coming in May, pictures of Virginia physicians at the 1985 General Assembly with an editorial by Percy Wootton, and Virginia Surgical Society abstracts.



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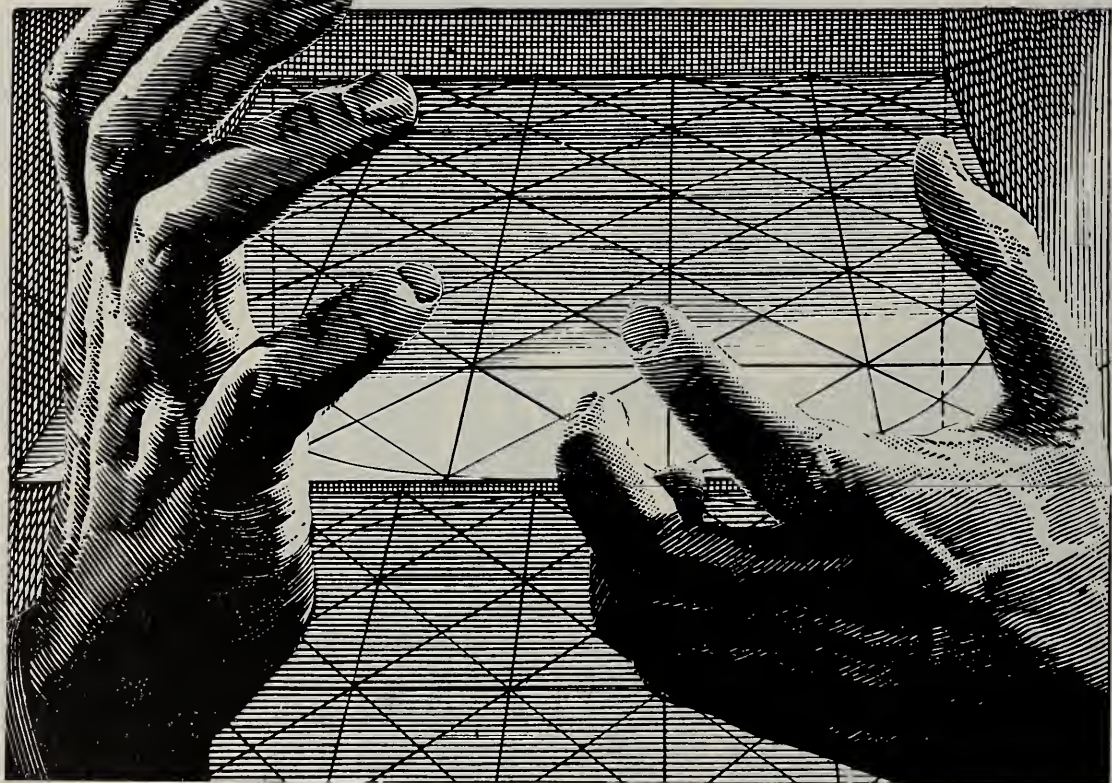
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\*JAMA Volume 248 No. 4 pages 336-339  
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# Searching For a New System

"We could not have designed  
a more expensive and less efficient  
method for compensating  
the medically injured."



**M**EDICAL MALPRACTICE PREMIUMS have doubled in Virginia in the last five years. A neurosurgeon in Northern Virginia currently pays \$35,000 a year for his liability coverage, and an ob/gyn in the same area pays \$24,000. In some areas of the country, a neurosurgeon pays \$100,000 for the same coverage. Most people close to the problem believe that the obstetrician's premiums will overtake the neurosurgeon's in the next rate filing. Most also predict that last year's average premium increase of 32% will be exceeded when the liability carriers in Virginia make their rate filings in July. If this continues, the neurosurgeon and obstetrician in Virginia could be paying \$100,000 per year for malpractice insurance within the next two or three years. Other specialties will also increase proportionately.

Is there a crisis? Is malpractice coverage available for Virginia physicians? Is it priced so that all Virginia physicians can afford it? The answer to the first question is a matter of definition. The answer to the next two at present is Yes. But a better question is, Under the current system, will liability insurance for the physician be available at an affordable price two years from now? The answer is not so clear. Consider some recent experiences in the state:

- A Richmond judgment against two internists for \$1,000,000 for alleged brain damage during a diabetic ketoacidosis crisis, a decision which stunned all with knowledge of the case, but is even more important when one considers that the cap was then \$750,000.

- A Richmond judgment against a local hospital of \$1,850,000 for a cerebral palsied child in which the physician was found innocent, but nurses judged guilty of malpractice.

- Western Virginia judgment of

by Ronald K. Davis, MD

\$8,300,000 against an obstetrician in another brain damaged child case. The hospital had already settled for \$650,000—only \$100,000 below the then existing \$750,000 cap. There were six separate awards: 1) \$1.85 million to the infant; 2) \$1.575 million to the mother; 3) \$1.175 million to the father; 4) \$1.70 million to the parents together; 5) \$1.0 million to the mother for punitive damages; 6) \$1.0 million to the infant for punitive damages.

There are several features of this case which are of great concern. First, the defendant physician was not a citizen of the United States, hence the trial was held in federal court and the appeal process will be along federal rather than state lines.

Second, the jury was instructed that the hospital nurses involved were agents of the doctor and if they were guilty of wrong doing, so was the doctor.

Moreover, this and the judgment against the two Richmond internists exceeded the then existing cap of \$750,000. If left to stand or won on appeal, this will either remove the cap or interpret the cap to apply to each individual health care provider rather than the aggregate. It doesn't take much imagination to see what effect this would have on the number of defendants named in subsequent malpractice cases.

Additionally, this is the first case in Virginia to the author's knowledge in which a non-patient has been awarded a judgment for medi-

cal injury. According to those involved in this case, the father was awarded \$1 million in his own right because he is now an alcoholic secondary to the emotional trauma he sustained at the birth of this child. The significance of this needs no comment.

Dr. Davis is chairman of The Medical Society of Virginia's Ad Hoc Committee to Study Malpractice. A vascular surgeon in private practice, he is a past president of the Richmond Academy of Medicine. Address correspondence to him at 417 Libbie Avenue, Richmond VA 23226.

cal injury. According to those involved in this case, the father was awarded \$1 million in his own right because he is now an alcoholic secondary to the emotional trauma he sustained at the birth of this child. The significance of this needs no comment.

Finally, \$2 million for punitive damages! If \$6.3 million doesn't get one's attention, will \$2 million more do it? The concept of punishing a physician by awarding a plaintiff more money is obscene.

There were many other cases during the past year which will impact unfavorably on premiums, and there are many more in the system awaiting maturity, but the trend is clear. The situation is bad, and it is going to get a lot worse.

And what about the patient? No physician wants the negligently injured patient to go uncompensated. Currently a patient with such an injury must wait four to six years on the average to be compensated by the courts. Approximately three-quarters of the court decisions will be rendered in favor of the health care provider. Only one-third of the settlement dollar ever finds its way to the patient's pocket, the remainder being consumed by the system. This doesn't include the sum spent defending the case—estimated at roughly one-half of the amount reserved. One might conclude that we could not have designed a more expensive or less efficient method to compensate the medically injured if that was our goal.

**W**HAT CAN WE DO? It is said that the major cause of the "malpractice crisis" is medical malpractice and that we must redouble our efforts at peer review. Most of those seeking a solution to the problem in Virginia feel that this is an oversimplification and that the solution will not be forthcoming even with the

## **"Claims are going to cost more dollars"**

Like other insurers, St. Paul's malpractice payouts have climbed dramatically. In 1983, according to St. Paul's numbers, the insurer realized net premiums of \$252 million, but paid out \$103 million in claims, and estimates it will write checks for another \$201 million for as-yet-unsettled 1983 claims, bringing the total to \$304 million. In 1982, when St. Paul's premiums came to \$211 million, the claims paid were \$68 million and the estimate of claims still to be paid was \$152 million—a total of \$220 million. It was only 10 years ago, in a Florida case involving a neurological mishap, that St. Paul for the first time paid out \$1 million to settle a malpractice claim.

"We're seeing \$1 million verdicts or settlements every week now," Norman Schindler, the company's medical liability claims officer, commented. "A million dollars? Yup. One a week. And that's maybe on the conservative side. I've got a case on my desk where our people are recommending we offer \$2 million."

The insurer recently agreed to an out-of-court settlement for a whopping \$6 million, the most it ever paid in a malpractice case. The defendant was a health care facility sued after complications during a surgical procedure rendered a patient severely debilitated. One reason St. Paul settled for such a huge amount was that a jury verdict in the same state two weeks before returned an award of \$15 million.

"Frequency and severity are up," Mr. Schindler said. "We're seeing more claims and we're seeing claims that are going to cost more dollars. We find it difficult to estimate how a jury is going to react to any given incident. We found 10 years ago that we could estimate better whether a doctor or patient would win a case, and if a doctor lost how much the jury award would be."

The unpredictability, of course, works both ways. "We had a recent brain-damaged baby claim against an obstetrician," Mr. Schindler said. "We evaluated it and saw a potential award of \$600,000 and we offered \$600,000. It was refused. We went to trial and tried it for four weeks and the jury came back after three days with no award." St. Paul estimates that two-thirds of all claims against it collapse with no money paid.

Getting a handle on what constitutes malpractice is slippery. "We used to have just wrongful death," Mr. Schindler said, "Now we're seeing cases of wrongful birth, such as when the sterilization process on a mother or father hasn't worked and a baby is born. The child then can bring a wrongful life suit (usually brought on behalf of an impaired child), saying I should not have been born. These were ideas not considered when the insurance was written."

A new area of exploration is stress. Jack Jones, director of a human factors group at St. Paul, is studying hospitals to identify places of high anxiety. "We're trying to get into the brains of people," he said. "Not many people are talking about the impaired physician. When doctors are under stress they are cognitively predisposed to have malpractice actions." —*Excerpted from Kleinfeld NR: The malpractice crunch at St. Paul. The NY Times, February 24, 1985, Section F, page 4.*

most elaborate system of peer review. Society demands perfection in its medical care where it is willing to accept less from every other profession. We certainly should make every effort to improve peer review, but when that is done, the problem will still be with us.

The Medical Society of Virginia sponsored a resolution which passed the 1984 General Assembly establishing a joint legislative subcommittee to study the malpractice issue.<sup>1</sup> Appointed to the committee were two members of the House, one from the Senate, one from the defendant's bar, one from the plaintiff's bar, one physician, and a representative of the hospital association. The Hon. Clifton A. ("Chip") Woodrum, Democratic delegate from Roanoke, chaired the subcommittee, which met seven times between July 1984 and January 1985.

Considerable attention was given by this subcommittee to the insurance industry, the cap, standard of care, expert witnesses, medical panels, and the statute of limitations. Organized testimony was presented by The Medical Society of Virginia, plaintiff's bar, the insurance industry, and patient advocates. The subcommittee completed its deliberations without recommending any substantive changes in these issues.

At the 1985 General Assembly, three bills were carried over from the 1984 session. None were favorable to medicine. All three died as a direct or indirect result of the subcommittee's deliberations. Feeling that the situation in Virginia deserves more study, it was the unanimous opinion of the subcommittee that its effort should be continued for another year. The appropriate legislation was passed for that continuance with little opposition.

It is generally agreed that a total legislative solution to the medical malpractice issue will not be forth-

coming. The legislature is no better equipped to handle this problem now than it was in 1976. Nonetheless, we must maintain a presence in the legislature. The plaintiff's bar will be back next year and the years after with a new set of bills aimed at improving their ability to successfully sue health care providers.

The Medical Society of Virginia's Ad Hoc Committee to Study Malpractice was created as a corollary to the legislature's subcommittee.<sup>1</sup> Dr. C. Barrie Cook, then MSV President, appointed these physicians to the committee: Dr. Alvin E. Conner, Manassas, chairman of the Society's Insurance Committee; Dr. Robert L. Adeson, Alexandria; Dr. Emerson D. Farley, Dr. L. Daniel Crooks, Jr., and Dr. James L. Ghaphery, Richmond; Dr. Claude P. Sherman, Martinsville; Dr. H. George White, Jr., Winchester; and Dr. Harold L. Williams, Newport News.

This ad hoc committee has met numerous times since it was formed in mid-1984. We have studied and discussed all the topics taken up by the legislative subcommittee and gave testimony at its hearings. We familiarized ourselves with legislative action beyond Virginia's boundaries, such as the Moore-Gephard bill. We have considered the malpractice situation in other states, such as Florida, where the Physicians Insurance Reciprocal has been bailed out of bankruptcy.

The ad hoc committee has also been studying alternative approaches to settling malpractice disputes; for instance, Dr. Adeson is currently evaluating binding arbitration as possible relief from the current tort system.

In search of a system that would 1) compensate the negligently injured patient quickly and fairly and 2) eliminate the agony and expense of the current tort system, we have

studied several so-called "no-fault" systems. Particularly, we have conferred several times with Prof. Jeffrey O'Connell of the University of Virginia, renowned as one of the architects of no-fault automobile insurance.

In an article following this report, Professor O'Connell describes the High School Athletic Injury Program he designed and proposes to adapt that program to malpractice disputes in a system he calls "neo no-fault."

The benefits of this proposal are obvious. Duplication of collateral sources is eliminated. Huge plaintiff's and defense attorney's fees are avoided. Instead of a contingency fee, a reasonable legal fee is paid. The plaintiff's award is quick and sure. If the original attorney advises against acceptance of the tender, a provision for a "second legal opinion" may be instituted.

It is believed that Virginia law as now constituted would allow such a program. The program does not require legislative action of any kind since it involves only a conventional contract arrangement between carrier and patient.

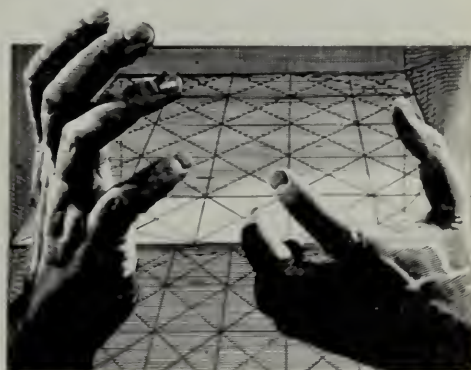
The Medical Society of Virginia has engaged Professor O'Connell as a consultant, and a major liability carrier, the Virginia Insurance Reciprocal, has agreed to work with him and the Society to create a pilot program. It is hoped that Virginia's two other malpractice carriers, St. Paul and Pennsylvania Casualty Company, will join in that effort.

**S**OCIETY HAS A PROBLEM, and it is being recognized. A substantial portion of the health care dollar is being spent resolving the dispute between the health care provider and the injured patient. The amount consumed by this endeavor has not been clearly defined but is growing at an alarming rate. In February a national conference

on medical malpractice was sponsored by the Urban Institute in Washington. Some abstracts from that meeting appear in the following pages. The insurance industry, patient advocacy groups, representatives of state and federal government, and the legal and medical professions were represented among the 350 attending. A faculty of 41 members from across the United States, including Professor O'Connell, presented a comprehensive program of review and possible reform. One could criticize the fact that only eight of the faculty were physicians and that business was not represented, but all in all it was a very good expression of the nationwide concern for this subject. Indeed, it was a national gathering for exchange of ideas for possible solutions to a very serious problem.

The solution will have to be fair to the three principles involved: the injured patient, the doctor and the consumer of health care. After all, the doctor only writes the check for his malpractice premiums; it is the consumer who pays. The largest consumer outside of government is business. The current system for resolving the conflict between the medically injured and the physician is broke, and Band-Aids<sup>TM</sup> won't fix it. Reform is inevitable and, indeed, has begun. Our natural ally is the business community. We need to enlist its aid.

1. AG: Malpractice a magnet for legislators. *Va Med* 1984;111:590-591



# Abstracts

*These abstracts derive from the National Medical Malpractice Conference held in Washington DC on February 21-22 under the sponsorship of the Urban Institute, a nonprofit policy research and educational organization in Washington, with the financial support of Hospital Corporation of America, General Reinsurance Corporation and St. Paul Fire and Marine Insurance Companies.*

**Provider Perspective.** Arthur J. Mannix, Jr., MD, general surgeon and president of the Medical Liability Insurance Company of New York, second only to St. Paul in premium dollar volume.

One can hardly view the climate today as that of crisis. The situation has been of major proportions for the past 15 years, and only as some new aspects attract the media is it perceived as a crisis. The mid-seventies were stated to be a crisis of availability, and today it is considered one of "affordability." The public cares little for the cost to the physician's pocketbook, failing to recognize that ultimately the patient is threatened by erosion of health care, higher costs, and loss of physician services.

Recent events in New York State make very real withdrawal from private practice by many physicians who might otherwise continue caring for their patients. Replacements by recent graduates? How many starting doctors would be attracted to an area where the malpractice premium approaches \$50,000 in the first year and the vision of 20% increases each year? Add to this the ever tightening constraints of the HCFA and the utilization of DRGs to compel a false sense of economy on hospitals, with insidious elimination of some safeguards which a patient has a right to expect, thus increasing both physician and institutional liability.

Nor are physicians alone, Consider an institution purchasing a malpractice policy for \$1 million/\$3 million coverage for \$1,200,000 annually. Consider how much modern equipment or additional nurses that money would provide. Does the current tort system, which many times takes over eight years to adjudicate a case, often times results in grossly unfair verdicts, and rewards the legal profession with more than the injured patient, cry out for drastic change? The medical profession speaks for the patient and states the system must be changed.

**Designing of No-Fault Alternative.** Laurence R. Tancredi, MD, JD, Professor of Medicine and the Law at the University of Texas, Houston.

In addition to eliminating the haphazard initiation of tort claims and their uncertain outcome, there are a number of features of a no-fault system which would improve the trust relationship between physicians and patients, and achieve savings in legal and administrative costs. Although many arguments have been made against the efficiency of a no-fault system, it can be shown that the stated objectives of the tort system itself can be better realized by a no-fault plan for medical malpractice. This presentation will focus on problems of designing and implementing the no-fault alternative and also direct attention to the need for additional data to resolve some of the remaining issues.

**The Enforceability of Other Limitations on Plaintiffs' Rights Under Existing Law.** Joseph N. Onek, Washington lawyer.

A. Arbitration is likely to survive judicial challenge because of the benefits to plaintiffs and defendants and society alike. Courts today approve of arbitration. Matters like equality of bargaining power, revocability, notice, availability of alternatives, and the scope of arbitration should, however, all be carefully considered in designing a contractual arbitration provision.

B. Limits on pain and suffering damages are likely to meet with considerable judicial hostility. The societal quid pro quo is far from obvious, and without legislative factfinding on insurance rates and the like, courts are likely to be skeptical. An individual quid pro quo could be introduced by offering lower costs to patients waiving or agreeing to limit such damages. If that is done, judicial reaction is likely to focus heavily on the availability of alternatives, in the market and from the particular provider. Even if such alternatives are available, however, such a provision might be struck down: It might be found against public policy (without legislative approval), or the difference in price, if large enough to constitute a real quid pro quo, might be thought to render the agreement less than fully consensual. In sum, contractual limitations on damages may have an uphill fight for survival.

C. As for changes in the liability standard, contractual adoption of a gross negligence standard would seem to face all the problems raised by an

*continued on page 242*

# The "Neo No-Fault" Alternative

"A potential defendant can opt to put into effect an insurance policy which tenders within 90 days of the injury a victim's net economic loss regardless of the existence of tort liability."

by Jeffrey O'Connell

**A**N INSURANCE CONTRACT drafted by the author is in effect in some 47 states for serious high school athletic injuries starting with the academic years 1983-1984, under the auspices of the National Federation of State High School Associations. The genesis and operation of a pilot program under this contract in the State of Washington for the academic year 1982-1983 is illustrated by the following two cases:

Chris Thompson of Seattle was left paralyzed by a football injury suffered in 1975, when he was a 15-year-old sophomore at West Seattle High School. Marty Wittman suffered a similar accident in December of 1982 when, as a 16-year-old sophomore at Curtis High in Tacoma, he was injured while competing in an wrestling match.

Because of those injuries, their lifestyles—as well as those of their families—were altered drastically.

Thompson waited and wondered

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Jeffrey O'Connell is the John Allan Love Professor of Law at the University of Virginia. A graduate of Harvard Law School and a renowned specialist in accident and insurance law, Professor O'Connell coauthored with Prof. Robert E. Keeton of Harvard the book generally credited with leading to the introduction of no-fault automobile insurance. He is the author or coauthor of nine other books published since 1966 and has written extensively for leading publications on insurance and law. Address correspondence to him at the University of Virginia School of Law, Charlottesville VA 22901.

Adapted from an article forthcoming in the *California Law Review*. © 1985 Jeffrey O'Connell, All Rights Reserved.

about whether he would ever receive any money from a \$6.5 million jury award made in 1982 (some seven years after his injury!). Wittman and his family, on the other hand, benefitted financially shortly after his accident from an insurance policy created because of the lawsuit Thompson had filed and won.

The new policy had been endorsed by the Washington Interscholastic Activities Association, exceedingly anxious to provide better coverage for its member schools in light of the Thompson case. The plan is basically a no-fault policy for unlimited medical expenses plus \$300 a week wage loss payable to catastrophically injured athletes. Its premium is approximately \$1 a year for each athlete covered, payable by the

## "This unsatisfactory lottery"

The determination in a malpractice case of a health care provider's fault requires complex and unpredictable litigation which attempts to unravel the often largely unknown mysteries of causation of injury and illness and to determine the appropriateness of treatment procedures about which even experts are often bitterly divided. The process is lengthy, and the results are erratic. Some injured patients recover nothing, some receive less than fair compensation, some recover amounts far in excess of their actual losses. Large portions of the awards depend on subjective and emotional considerations. The results are often fortuitous, yet society pays high costs for operating this unsatisfactory lottery.

—Abstracted from *"The Case Against the Current Malpractice System,"* a speech delivered by Jeffrey O'Connell at the National Medical Malpractice Conference on February 21.

school. The plan has a \$10,000 deductible in that when an injury occurs and the medical expense and/or wage loss exceeds \$10,000, the policy is effected.

It provides for such things as medical and rehabilitation expenses, transportation costs, costs of remodeling the family home to accommodate a wheelchair, plus wages lost by parents who have to take off work to help administer care to the injured athlete. Also, the policy specifies it will provide up to \$300 of income a week for life, if the beneficiary has less than \$300 of income from other sources. But nothing is paid for pain and suffering.

The coverage, however, will go into effect only if the beneficiary and his family agree not to file a tort suit against the school, school district or state athletic association. In other words, no one has to sign away his right to sue, but the plan provides that its benefits are in lieu of tort litigation.

### Applying "Neo No-Fault"

In order to avoid legislative pitfalls, I am making a new proposal which might be termed "neo no-fault" since it does not mandate a substitution of no-fault benefits for tort liability traditionally associat-

ed with workers' compensation and no-fault auto statutes. Nor does it entail "add-on no-fault", whereby no-fault benefits are provided with no restrictions on tort liability claims above no-fault benefits. This proposal, exemplified in that applicable to high school athletic injuries, can be applied to all kinds of personal injury.

Under this proposal, any potential defendant of a personal injury claim puts in effect, at its option, an insurance policy or product warranty which binds itself, by the time services are rendered or a product sold, to tender within 90 days of any injury resulting from the product or service a victim's net economic loss regardless of the existence of tort liability in any particular case. In other words, the tender would be made regardless of whether the injured party could prove defendant's conduct or product was faulty and himself free from contributory or comparative fault. Net economic loss will include any resulting medical expenses, including rehabilitation and wage loss (the latter perhaps with a cap of, say \$300 a week), beyond the victim's own collateral sources such as accident and health insurance, sick leave, etc. Benefits will be payable month by month as loss

accrues. The victim and anyone with a claim based on the victim's injury, such as members of his family, will then be given an additional 90 days to accept such tender or to claim in tort. In other words, upon acceptance of the no-fault tender of net economic loss, the victim will be required to waive his tort claim against the tendering party. In still other words, the plan entails a potential tort defendant (whether, for example, a health care provider, or a manufacturer, wholesaler or retailer of a product) making, if it so chooses, a pre-accident commitment to make a no-fault post-accident offer of a potential accident victim's net economic loss conditioned upon the latter's post-accident abandonment of a normal tort claim.

It might be asked how a pre-accident guarantee to make a post-accident tender of net economic loss differs from an identical post-accident offer of settlement under present law. Because the tender is made pursuant to a pre-accident guarantee—before the precise causation or circumstances of any injury can be known—it is not an admission of any kind. This obviously makes it much more attractive for a defendant to make a tender. In other words, because the guarantee is made before the defendant can know how likely it is he will be held liable, the prejudice associated with a post-accident offer of settlement can be avoided.

### Softening the Risks

True, by giving the victim a post-accident option of accepting or rejecting payment of net economic loss, the possibility of adverse selection arises; those with valid tort claims could choose to sue in tort and those without them to accept the tender. But those who have suffered serious injury would seem especially likely to become risk averse in a choice between certain,

if limited, benefits, as opposed to the gamble of a lawsuit. This has been the (admittedly as yet limited) experience under the high school athletic program where, since the program's inception, all of the six eligible seriously injured athletes have opted to accept no-fault benefits and waive their common law rights.

Granted, however, that such an insurance program may entail unusual risks of unpredictable costs for an insurer. One way to soften those risks would be for the tendering party, if it chose to so provide in the contract, to require the victim to waive tort claims not only against the tendering party but against third parties as well. Thus a provider of products or services tendering benefits would gain leverage to bargain with any third party, also arguably contributing to the accident, for a contribution to the pool of insurance funds required to pay net economic losses. Such a contribution could be exacted at the start of the policy period with any such third party becoming an additional insured under the policy in return for an annual contribution to the policy's premiums. The insurance contract might also call for the right of the tendering party to designate any third party at the time benefits are tendered as also benefitting from the waiver of tort claims in return for a contribution to the pools required to pay a given victim. Nor would there be a need for the tendering and third party to agree immediately on the amount of the third party's contribution under either a pre-accident or post-accident sharing agreement; rather the parties might agree to arbitrate at their convenience their respective shares of the no-fault damages or pool. The point is, however, that by such devices a health care provider could gain help in funding its tender from, say, other health care providers treating the patient or

from a surgical instrument manufacturer. Similarly, a manufacturer of a product could gain the same help from a component manufacturer, etc.

Note the enormous pressure on a third party potentially liable in tort to join in the program—on either a pre-accident or post-accident basis. If it does not, it stands to face a much more aggressive injured claimant, who, like a workers' compensation recipient pursuing a third-party tort claim, has been assured of his/her basic losses and is thus much more able to withstand settlement offers than a normally impecunious injury victim. Such a claimant will therefore be likely to pursue aggressively the "best of both worlds": no-fault benefits covering essential losses, followed by tort liability payment covering any unreimbursed economic losses, plus pain and suffering.

#### **Limiting the Tender**

As to non-serious injuries, victims of malfunctioning products or health care delivery are today less likely than, say, victims of slips and falls or auto accidents to pursue tort claims. Thus from the viewpoint of a health care provider or a product seller, it would ordinarily make less sense to offer a no-fault compensation system covering small injuries since they result less often in payment from the current system. Today, even when there is relatively clear liability, if the victim's loss from a malfunctioning product or medical service is only a few thousand dollars and there is no residual disability, it is often not profitable for a competent plaintiff's attorney to pursue the case. But here lies the virtue of the flexibility of the contract approach outlined above: The contract calling for the tender of net economic loss can be structured, at the option of the health care provider or product seller, to exclude smaller

cases. As with the high school injury policy, the contract should include a dollar deductible of, say, \$10,000 of actual medical expense or wage loss or even higher, such that the tender need not be made in cases of lesser amount when tort claims themselves are rare.

In addition, further restrictions on the definition of the insured event calling for a tender of net economic loss could be devised, limiting tender to, say, cases of adverse surgical results involving severe brain damage or paralysis. Or more generally the tender could be limited to adverse results in surgery conducted on a clean operative field (i.e., not contaminated by infection), with certain areas of the body being specifically defined as not clean operative fields such as rectal, vaginal, colonic areas and burn sites. Furthermore, adverse results could be defined so as not to include those that are directly related to the expectable progression of the illness or disease that caused hospitalization in the first place. Similarly for product injury, the requirement of tender could be limited to certain types of injuries from a product such as amputation, and/or limiting the age of the product, injuries from which require tender. Also, the obligation to tender could be limited to a pilot program covering a limited period or place after which the results of the program could be assessed.

#### **Financing the Benefits**

In effect the tender scheme herein proposed entails a pre-accident sale to a potential accident victim of the insurer's capacity at common law to resist making a prompt offer to settle the claim for the victim's real losses. And the price for that surrender of defendant's right to be intransigent is the likelihood of the victim's post-accident surrender of common law tort rights, perhaps coupled with a

higher price for the product or service in question. If enough accident victims with serious tort claims are sufficiently risk averse to accept the tender of net economic loss, it may well be that such tenders to all accident victims can be completely financed out of the surrender of tort claims, with no need for additional funds in the form of higher prices for goods and services to pay for the redemption of accepted tenders. If not, some additional funds may be necessary, but genuine value would seem to be transmitted for any additional costs. Those early 20th century employers who backed workers' compen-

sation in return for surrender of tort rights were not at all sure what the new no-fault benefits would cost compared to tort liability, but they were willing to take the gamble that either the benefits would cost no more or that any additional cost would be worth a far saner insurance system. At least some of their grandchildren will probably be willing to make a similar bet today. Indeed, that is the case with schools covering athletic injuries under the program described above. In effect, what is being sold under such contracts is a group disability insurance contract, marketed by a product seller to its

customers, by a health care provider to its patients, or, in the program already underway, by a school to its athletes. But the key difference under such a new contract is that it is financed in large or total part by money formerly spent (or better said, wasted) on tort litigation.

#### **Role of Plaintiffs' Lawyers**

If at least some defendants will be willing to sell their right to take advantage of injury victims' tort plight, what of the role of victims' lawyers? Note the new dilemma of such lawyers. As pointed out above, a tender made pursuant to a pre-accident commitment—before

*continued from page 238*

agreement to limit damages—no obvious quid pro quo; dependence on legislative-type factual judgment; general judicial hostility.

**The Mechanics of HR 5400.** John S. Hoff, Washington lawyer.

HR 5400 reforms the present fault-oriented system but is not a no-fault or workmen's compensation program. It provides a method for encouraging providers to make tenders of payment for compensation for net economic loss without requiring them to do so where they believe they are not at fault.

The mechanics of the proposal: 1) Provider option to make tender of payment of noneconomic loss within 180 days of bad occurrence. 2) Payment is net economic loss as it accrues, not any estimated lump sum. 3) Tender forecloses patient's ability to bring a tort action. 4) Patient might be given the right to go to arbitration on fault, with damages limited to net economic loss, where a provider does not make a tender. 5) Provision allows third parties to receive benefit of tender. 6) Bill could permit patient to accept or reject any offer made. If the patient rejects an offer, he may pursue the current tort system but cannot collect net economic loss, and damages for non-economic loss would be subject to a cap.

The bill will not have adverse effects on deterrence: Substantial payment would be required to foreclose tort action, and there are significant non-tort controls, more so than in automobile and workmen's compensation.

**Proposals for Reform in State Legislatures.** Elvov Raines, Associate Executive Director of the American Society of Law & Medicine, Boston.

Numerous proposals for state legislative reform have been promoted by physicians and other health care providers in recent years. Encountering stark political realities has not shaken the resolve of advocates for reform but has been instructive, exposing the interaction and occasional interdependence of competing interests among proponents of reform, attorneys, insurers, business, state legislators, and the public. Moreover, revealing experience regarding public attitudes toward physicians and the health care delivery system, as well as the quid pro quo expectations of legislators, has improved the political sensitivity of organized medical liability reform supporters.

Current proposals are not novel in their content but are more realistic in scope than in the past.

#### **Reforming of the Fault-Oriented System.**

Patricia Danzon, Associate Professor in Health Policy and Policy Sciences, Duke University.

Damage awards should be restructured to resemble the insurance people buy voluntarily. Payment for economic loss should follow a schedule based on age and injury severity, not determined on an individual case-by-case basis. Collateral insurers should have full subrogation rights. Payment for pain and suffering should be eliminated, except in cases of permanently disabling injury and then should be a modest, fixed amount. Payment should be made periodically, but the amount should be

the precise causation or circumstances of any injury can be known—is not an admission of any kind. Threats to take such an offer off the table after 90 days are much more credible than with a post-accident offer not made pursuant to a pre-accident commitment. Thus, plaintiff's lawyers who advise seriously injured clients to reject such a prompt but transitory offer covering such essential losses could well face malpractice actions themselves if the gamble of tort litigation fails. Indeed, a virtue of marketing this insurance plan to health care providers and product sellers is its appeal of allowing them to

effectively strike back at the legal profession's perceived harassment of health care providers and businesses through personal injury claims.

Under this plan plaintiffs' lawyers will be under similar pressure they now impose on health care providers and product sellers: 1) to get informed consent from—or to warn—clients as to the risks of rejection of the tender, and 2) to face litigation after a bad result. Such pressures on plaintiffs' lawyers will likely lead to acceptance of the tender of net economic loss and thus to a lessening of the strains and difficulties on health

care providers and product sellers now resulting from legal claims by injured purchasers of goods and services.

### Conclusion

If, as seems evident, tort law as it applies to personal injury disadvantages both injured and injuring parties, why shouldn't contractual devices be devised to allow alternatives to such tort law to the mutual advantage of both parties? Such devices are available and indeed are in place for seriously injured high school athletes. Surely others will have the wit and wisdom to follow (and thereby avoid) suit.

determined at time of trial, to preserve incentives for rehabilitation. An uninsurable fine in cases of gross negligence should replace punitive damage awards. The statute of limitations should be relatively short, running from time of injury, not from discovery. The standard of care should recognize different standards for alternative delivery systems (HMOs, etc.) and costs as a defense. The fault-based rule of liability should be retained.

Contractual modifications of this revised tort system should be encouraged. Tort reform and private contractual alternatives are complements, not substitutes.

**Agreements Reallocating Rights and Responsibilities: Changing the Forum.** James A. Henderson, Jr., Professor of Law, Cornell Law School.

Going to court imposes substantial costs on both (all) sides of a medical malpractice claim. The major alternative forum is binding arbitration, in which the substantive rules of tort remain the same, but the change in forum works real savings in transaction costs. Today, in over two-thirds of the states, general statutes authorize arbitration agreements; and in a smaller number of states, statutes specifically authorize (and to some extent regulate) agreements to arbitrate.

From the provider's perspective, the sort of arbitration agreement that is most impervious to attack is one entered into between a prepaid health benefits provider and the representative of a group of recipients, where it can be shown that the terms of the contract (including the arbitration agreement)

are fair on their face and were negotiated at arms length. On the other hand, the most vulnerable sort of agreement is one entered into on an individual basis by a recipient seeking emergency medical treatment who signed the contract, unfair on its face, in haste after being told he could either sign it or go sleep in the snow.

**Trends in Liability Insurance.** James R. Posner, PhD, vice president of Marsh & McLennan, Inc., insurance brokerage, New York.

In 1984 we saw the start of a sudden upswing in premiums after a protracted "soft" insurance market of four to six years, during which the high investment yields of the early eighties and the influx of new carriers led to continued price-cutting by the insurance companies.

The underlying force driving malpractice costs is the number of "compensable injuries" that occur. Many more occur than are compensated. The liability system acts effectively to reduce the total payments, and change to a "no-fault" system could lead to greater outlays.

Certain medical specialties and geographical areas will continue to bear the brunt of high rates. About 50% of the malpractice premiums are written in five states. Differentials in the premiums paid among medical specialties in a given state are often 10:1 or more, with obstetricians now at the top.

The picture in early 1985 is of suddenly shrinking numbers of companies willing to write malpractice insurance; lower limits of insurance available; and the heightened expectation of insolvencies.

# Cancer Trends: Brachytherapy

M. Moinuddin Ali, MD, and Tapan A. Hazra, MD,  
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Improvements in man-made isotopes and after-loading techniques for multiple sites has brought renewed interest in the use of ionizing radiation for treatment of certain cancers. The authors describe current applications of interstitial brachytherapy, in which radioactive sources are embedded in the tumor tissues.

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**T**HE application of ionizing radiation in clinical radiotherapy can be classified as "teletherapy", literally meaning treatment at a distance, or "brachytherapy", short-distance therapy. The terms "endocurietherapy" or "interstitial therapy" are used when radioactive sources are embedded in the tumor tissue; these are types of brachytherapy.

Brachytherapy has been used as treatment for cancer either alone, as in carcinoma of the prostate, or in combination with x-ray treatment, as in head

and neck cancer, breast cancer, cancer of the anal canal and other sites.

Since the discovery of radioactivity, isotopes have been used for brachytherapy with varying degrees of success. Radium was the most commonly used isotope in the early days. The use of radioisotopes was slowed down in the 1940s and 1950s due to the increased awareness of radiation safety and the availability of super-voltage machines, but there is now a revival of interest in the use of radioisotopes because of the development of better man-made isotopes and of afterloading techniques for multiple sites, and because of disenchantment with the results of local control.<sup>1,2</sup>

In interstitial therapy the tumor is directly implanted with radioactive sources. There is also intracavitary therapy, in which the tumor is irradiated by close contact with a radioactive source maintained in position in various ways. In this presentation we will discuss interstitial therapy.

The most commonly used radionuclides for interstitial therapy are shown in Table 1.

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Fig. 1. Iridium<sup>192</sup> implant in place for base of tongue lesion with gold button technique.



Fig. 2. Gold buttons, intraorally, afterloading tubes in place.



Fig. 3. One week after removal of implant. No skin marks seen.

The technique of afterloading was conceived and perfected by Dr. Ulrich Henschke in the early 1950s at Memorial Hospital in New York.<sup>1</sup> This method allows the insertion of radionuclides into tumor tissue without radiation exposure to personnel. There is an initial review of the geometry of the site and the dosage. Hollow needles are inserted into the tumorous tissue under appropriate anesthesia, and after distribution and dosage calculations have been reviewed by the radiation oncologists and the physicist, the sources are inserted in the needles.

The clinical application of brachytherapy can be divided into definitive therapy and palliative therapy.

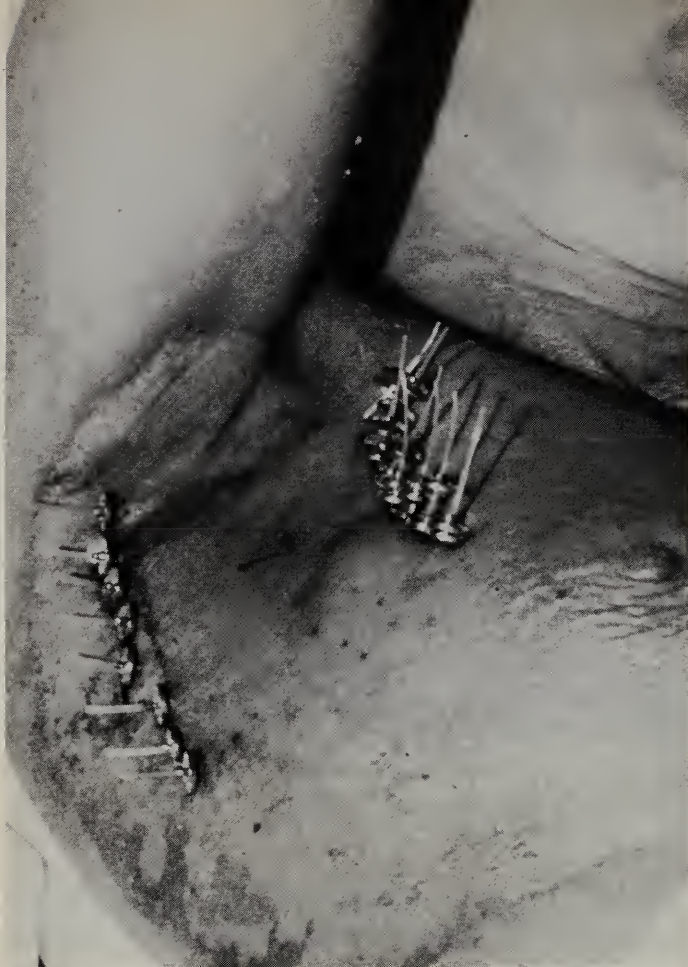
#### Definitive Therapy

Definitive therapy aims to cure. It is used for localized and accessible cancers, especially in the head and neck region, to boost the dose of radiation to the primary tumor. It is usually combined with external beam therapy.

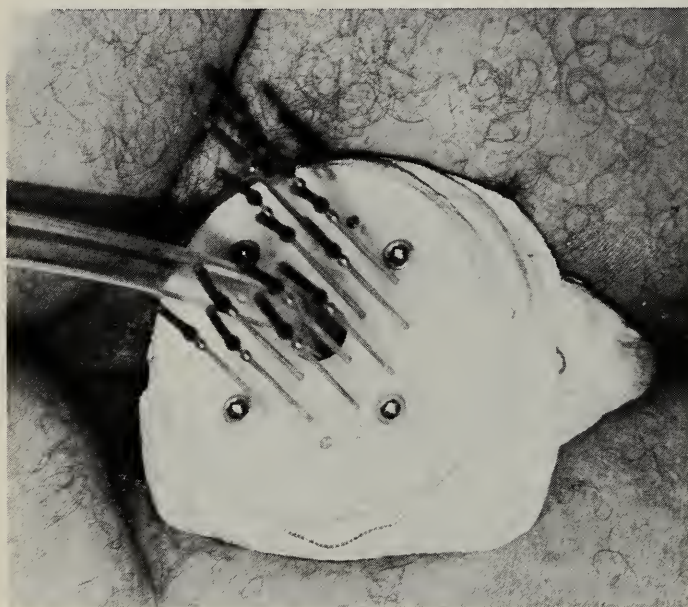
Figure 1 shows a squamous cell carcinoma at the base of tongue for which a removable implant was performed. After appropriate anesthesia, hollow tubes were placed intraorally in the entire tumor volume. The patient was "loaded" with radioactive

Table 1. Radionuclides Commonly Used for Interstitial Therapy.

	Energy	Half-life
Iridium <sup>192</sup>	350-660 KEV	74.5 days
Iodine <sup>125</sup>	27-35 KEV	60 days
Gold grains <sup>Au198</sup>	0.41 to 1.09 MEV	2.7 days
Radium needles <sup>Ra226</sup>	.047-2.44 MEV	1600 years



**Fig. 4.** Removable iridium<sup>192</sup> implants in intact breast to boost dose at surgical scar.



**Fig. 5.** Removable iridium<sup>192</sup> implant for low-lying lesion of anal canal. Surgery was spared, patient doing well 18 months later.

ribbons, which were inserted into these hollow tubes (Fig. 2) and which remained there for the required period of time to deliver the desired radiation dose. Figure 3, taken one week after the removal of the implant, reveals no sequelae to this procedure, which was well tolerated by the patient.

Cancer of the breast is another example in which

an implant with radioactive material saves the patient a major surgical procedure and leaves the breast intact.

These patients first undergo external beam irradiation of the entire breast to control the multicentricity of the malignant process, and then, a week or ten days later, the implant procedure is carried out. Figure 4 illustrates such a case. Results are excellent in terms of both local control and cosmesis.

Patients with localized and early prostatic cancers are often treated with permanent interstitial implants of iodine<sup>125</sup>. This controls the disease while maintaining sphincter function and potency. The procedure is performed with the help of the urologist and the radiation oncologist, who have been trained to perform such an implant.<sup>2-4</sup>

Permanent implants for prostatic cancer are indicated in patients with clinical Stage B and early Stage C adenocarcinoma of the prostate; patients who have needle biopsy of the prostate for diagnosis only but no transurethral resection; and patients who are in good general condition, i.e., Karnofsky of 70 or more.

The interstitial therapy with afterloading technique is also used in early carcinoma of the female urethra. This not only can eradicate the cancer in the majority of selected cases, but also preserves the functional integrity of the organ.

There have been several reports in the literature recently regarding carcinoma of the anal canal in which external beam + interstitial therapy has been used in combination with 5-fluoruracil and mitomycin C for excellent results in curing some very early lesions.<sup>10-12</sup> Figure 5 illustrates the treatment of such a patient. The main indications for this procedure are 1) squamous cell carcinoma of the anal canal 3 cm or less and well to moderately well differentiated histologically; 2) lesion located in the anal canal within 5 cm of the anal verge; 3) no lymph node metastasis present in the groin; 4) no evidence of distant metastases; 5) patient in good general condition.

In addition to the conventional interstitial techniques described above, the "template" technique with removable sources is also utilized at the Medical College of Virginia for the treatment of early prostatic carcinoma (Fig. 6). The approach is transperineal. After the urologist has completed pelvic lymph node sampling and checked the bleeding spots with little or no mobilization of the prostate, the patient is placed in semi-lithotomy position and the radiation oncologist takes over the procedure.

This technique has the potential benefits of both

interstitial and external beam therapy and within our experience is well tolerated by the patients. Since this is an afterloading technique, no radiation sources are handled in the operating room, and no exposure to personnel is involved.

### Palliative Therapy

Brachytherapy is also utilized by locally advanced malignant tumors where surgical resection is not possible because of the anatomical location, as in cancers of the pancreas, recurrent carcinoma of the cervix and rectum, and late reappearance of nodal disease in the head and neck region. Radioactive sources can be implanted in the residual areas alone or in conjunction with surgical resection.<sup>15</sup>

In locally advanced pancreatic carcinomas, permanent implantation of the iodine<sup>125</sup> seed at the time of surgical bypass achieves good palliation and at times total shrinkage of the tumor mass itself (Figs. 7A and 7B).

In some patients with discreetly painful primary or metastatic disease in the abdomen, i.e., carcinoma of the pancreas, when surgical resection is not technically feasible, implantation of iodine seeds may be a helpful palliative procedure.<sup>15</sup> We performed a permanent implant of iodine<sup>125</sup> seeds in a patient whose carcinoma of the pancreas had been treated 3½ years previously with chemotherapy and external beam irradiation but who suffered from painful metastatic nodal disease in the abdomen, and the patient was pain free and doing well 14 months after the implant.

The use of brachytherapy should be regarded as an integral part of cancer treatment in patients when



Fig. 6. Removable iridium<sup>192</sup> implant for prostatic carcinoma with perineal approach.

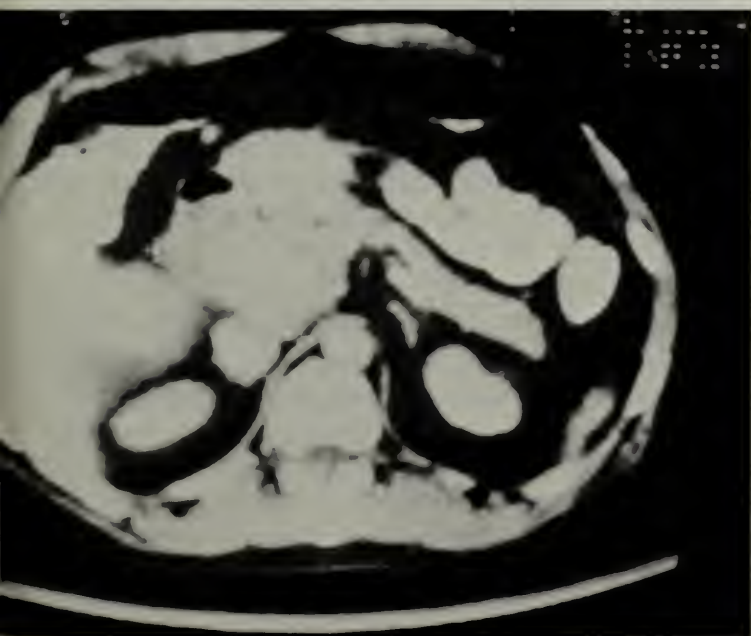


Fig. 7A. Biopsy proven, locally advanced, and unresectable adenocarcinoma of head of pancreas.

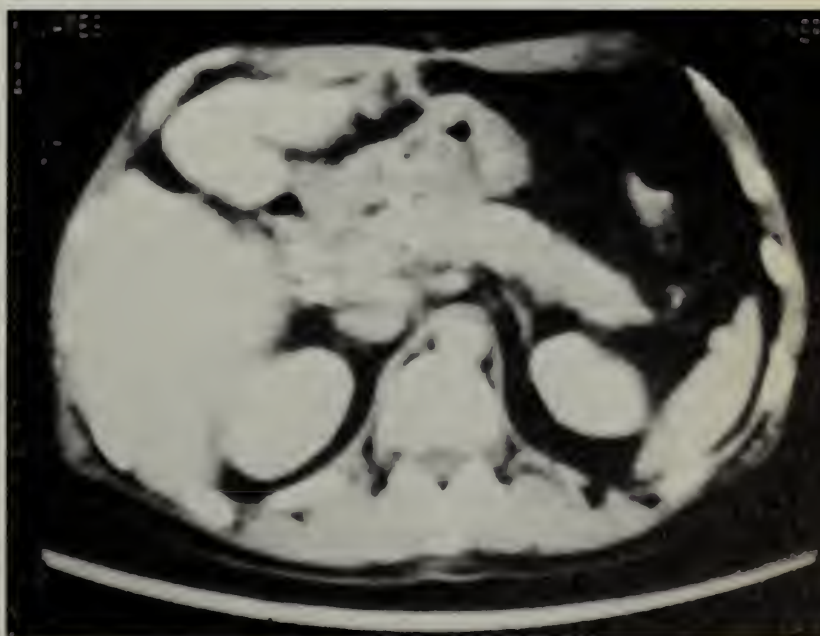


Fig. 7B. Six months later, marked regression of tumor with iodine<sup>125</sup> implant, x-ray with surgical bypass.

it is considered applicable by the radiation oncologist.

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## Simultaneous Kawasaki Disease in Identical Twins: Case Report

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FIRST recognized in Japan by Dr. Tomisaku Kawasaki in 1967, Kawasaki disease has been reported endemically and epidemically in a number of areas in the United States since 1971.<sup>1</sup> Over 5,000 new cases are reported annually in Japan.<sup>2</sup> Although reports from Japan suggest some occurrence in families,<sup>2</sup> outbreaks in the continental United States have shown "no evidence of person-to-person transmission nor common source exposure."<sup>1</sup> A single report from Hawaii describes the disease appearing in two siblings seven days apart,<sup>3</sup> and one other report from Jamaica in 1978 describes the occurrence in two siblings within a 24-hour period.<sup>4</sup>

We report Kawasaki disease occurring in identical twins with almost simultaneous onset of symptoms. Both had a perineal rash previously described as characteristic of the disease<sup>5</sup> and both had had respiratory illnesses within the month prior to the onset of symptoms.<sup>6</sup> It is of interest to note that both infants had had pyloromyotomy for pyloric stenosis at age 35 days with the onset of projectile vomiting developing in both within a 24-hour period. Pyloric stenosis occurring concurrently in both sibs of monozygotic and dizygotic pregnancies has been well documented previously.

#### Case Report

Twin C, a 10-month old white girl, developed a respiratory infection with cough and mild wheezing 16 days prior to her hospitalization. Treatment at the time consisted of erythromycin estolate (Ilosone®) and anhydrous theophylline (Elixicon®) for a seven-day period. She remained well thereafter until the

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Table 1. Clinical Manifestations of Kawasaki Disease in Twin C (—) and Twin K (---).

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 11	Day 15	Day 32	Day 150
Fever	—	—	—	—	—	—	—				
Rash	—	—	—	—	—						
Desquamation								—	—		
Perineal Rash		—	—	—							
Perineal Desquamation				—	—	—	—				
Conjunctival Redness	—	—	—	—	—	—					
Redness & Edema—Hands/Feet		—	—	—	—						
Oral Changes		—	—	—	—	—	—				
Lymphadenopathy				—	—	—	—				

night prior to admission when she developed a fever, irritability, anorexia, and had one episode of vomiting. On the morning of admission, a faint erythematous rash involving the entire body and face was noted by the mother. When the child was examined in the office later that morning, already present were a sharply demarcated confluent deep red rash in the groin region extending from the mid-thigh to just below the umbilicus, reddened ocular conjunctivae with dilated vessels, hyperemia of the pharynx, and some redness and nonpitting edema of the palms and soles.

When the mother returned home later that morning she noted the same rash in identical Twin K. Both infants were hospitalized 18 hours after the onset of the illness. Twin K had also had a respiratory illness with wheezing severe enough to require the administration of subcutaneous epinephrine 19 days prior to hospitalization.

The subsequent hospital course for both infants (Tables 1 and 2) fulfilled the major diagnostic requirements for Kawasaki disease. It is of interest to note that all of the criteria except cervical lymphadenopathy and desquamation were present within the first 48 hours. Both children were extremely irritable until the fever subsided, another characteristic of the disorder. Both developed mild anemia, had elevated sed rates and C-reactive protein, and platelet counts rose to over 1,000,000 by the eleventh day of illness. Cultures of the eyes, throat, urine and blood were all negative, and stool cultures for *Yersinia pseudotuberculosis* and other enteric

Table 2. Lab Data of Kawasaki Disease in Twins C and K

Tests	Twin C	Twin K
<i>WBC</i>	9800–14600	8900–12600
<i>Differential</i>		
Polys	48–59	54–58
Bands	3–20	4–22
Eosins	1–11	0–7
Lymphs	33–34	21–37
<i>Platelets</i>		
Day 1	357,000	344,000
4	459,000	452,000
6	494,000	501,000
11	1,009,000	1,032,000
15	673,000	840,000
32	496,000	570,000
<i>Sed Rate</i>		
Day 4	62	60
6	54	59
15	53	61
<i>Hg, Hemat.</i>		
Day 1	10.4, 33.9	11.0, 35.0
4	9.2, 29.4	9.8, 31.2
6	8.6, 27.0	9.6, 30.6
11	9.7, 30.0	9.7, 30.0
15	10.2, 32.7	9.3, 30.8
<i>C-Reactive Protein</i>		
Day 2	1:128	1:128

pathogens were also negative. Chest x-rays were within normal limits.

Aspirin 100 mg/kg/day was begun shortly after admission and by the seventh hospital day both infants were dramatically improved in disposition, the fever was gone, and they were discharged home. Aspirin dosage was gradually tapered and stopped by the end of the second month.

Neither infant showed any sequelae. They were

## Coping With the Vaccine Crisis

**A**N editorial in the November issue of VIRGINIA MEDICAL called attention to an immunization crisis. At that time Wyeth Laboratories, one of three manufacturers of DTP (diphtheria/tetanus toxoid and pertussis vaccine, adsorbed), announced withdrawal from the field. Since then Connaught Laboratories has followed Wyeth and will no longer produce the vaccine. Lederle Laboratories is now the sole manufacturer. The shortage has obviously become even more acute, and the Centers for Disease Control has issued the following recommendations for dealing with this crisis. Since the first three doses of DTP vaccine provide protection against pertussis in 70%-90% of recipients and immunity to diphtheria and tetanus in over 90% of recipients, it is recommended that no change be instituted in this routine. However, effective immediately all health care providers should postpone administration of the DTP vaccine booster doses usually given at 18 months and 4-6 years of age until greater supplies are available. When adequate DTP vaccine doses become available, all children under 7 years of age who miss these doses should be recalled for remedial immunization.<sup>1</sup>

EDWIN L. KENDIG, JR., MD

1. CDC. Diphtheria-tetanus-pertussis vaccine shortage—United States. MMWR 1985;33:695

examined on a regular basis by Dr. Rufus B. Jennings, pediatric cardiologist at Children's Hospital of the King's Daughters, Norfolk, who reported normal electrocardiographic and M-mode and 2-D echocardiographic studies with normal clinical cardiac examination during the six months of followup.

### Discussion

As has been noted in previously described outbreaks of Kawasaki disease,<sup>1</sup> respiratory illness within a 30-day period often precedes the onset of the illness as it did in these twins. The almost pathognomonic striking perineal rash was present within the first 24 hours. We have now seen four consecutive children with Kawasaki disease in

whom this characteristic rash was one of the earliest manifestations. Aballi and Bissen,<sup>7</sup> reviewing findings in 40 cases of Kawasaki disease, found that 62.5% also had the rash first in the diaper region.

Worldwide efforts to identify a causal agent for Kawasaki disease have proved fruitless up to the present, but a report from Japan<sup>8</sup> suggests that a variant strain of *Propionibacterium acnes* may have a causative role, with the house dust mite acting as a vector. The organism was isolated by means of anaerobic culture from a lymph node biopsy specimen and from blood samples of five of 23 patients with early Kawasaki disease. The same bacillus with the same serotype was isolated from house dust mites from the homes of six patients. The authors hypothesized that during the cleaning of rugs harboring the infected live mite, inhalation of the organism may occur, particularly by small children crawling or lying on the rugs. Kukuta et al<sup>9</sup> reported preliminary studies linking Kawasaki disease to an abnormal response to Epstein-Barr virus.

In the case of these twins, there were no possible contacts within the family or the neighborhood and only a few sporadic cases were reported in the surrounding Tidewater area of Virginia during a 6-month period before and after the appearance of the illness in the twins. No rug shampoo had been used, although the household dog had been shampooed during the month preceding the appearance of the illness.

Although it seems apparent that the twins were exposed simultaneously to the same microorganism or environmental factor, a genetic predisposition is a distinct possibility. Kato et al<sup>10</sup> in Japan reported HLA phenotype-Bw22 to be statistically more common in patients with Kawasaki disease as compared to control subjects. Krensky et al<sup>11</sup> in a study of 27 patients in the Boston area, found a significant association in white patients with phenotype HLA-Bw51, and no cases associated with Bw22. However, HLA-typing of the twins in our study showed them both to have HLA A1,30B8,17Cw3 antigens. H influenzae type b disease has been reported in nine sets of twins, five of the nine second twins being admitted to the hospital within two days of the index twin's admission.<sup>12</sup> The authors state that genetic predisposition of *H influenzae* type b disease seems likely because of the association between antibody response to *H influenzae* type b disease and genetic marker lymphocyte antigens, and between immunoglobulin allotypes and antibody response to *H influenzae* type polysaccharide vaccine. Although susceptibility to infection in Kawasaki disease could have a genetic basis, the

paucity of reports of occurrence in siblings and contacts is puzzling.

No effective therapy for Kawasaki disease has been reported. Aspirin is used for its antiinflammatory properties and its effectiveness in inhibiting platelet aggregation. Corticosteroids appear contraindicated and may even increase the frequency of aneurysm formation.<sup>13</sup> Furusho et al<sup>14</sup> gave daily intravenous infusions of 400 mg/kg of gamma globulin for five days to 14 patients with Kawasaki disease. None developed coronary aneurysms as compared to seven out of 40 "controls" in whom coronary aneurysms were identified.

To our knowledge there has been no previous published report of the simultaneous occurrence in identical twins of Kawasaki disease.

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## OBITUARY

### R. Terrell Wingfield, MD

Dr. Robert Terrell Wingfield, president of the Lynchburg Academy of Medicine in 1980-1981, died February 21 at his home in Naola. He was 60 years old.

A native of Lynchburg, Dr. Wingfield received both his bachelor's and medical degrees at Duke University, then trained at Guys Hospital, London, Lynchburg Training School and Hospital, and the University of Virginia, returning to Lynchburg to enter private practice as a psychiatrist. He served in the United States Navy during World War II.

Dr. Wingfield held many posts of leadership at Lynchburg's hospitals. A long-time member of The Medical Society of Virginia, he belonged to many other professional organizations, including the Neuropsychiatric Society of Virginia, of which he had been president, the American Psychiatric Association, and the Society of Teachers of Family Medicine.

### Memoir of W. J. Rein 1899-1985

*By Mason Smith, MD*

Walter John Rein departed this life on February 22 in the 85th year of his age.

He will be missed.

Those of us fortunate enough to have enjoyed his friendship will remember him with much love. He was a physician, not a health care provider. A gifted eye surgeon, he was first his patients' doctor.

He was an active participant in and director of many organizations: his church, the Richmond Eye and Ear Hospital, the Lions Club, the Eye Bank Association of America, and the Old Dominion Eye Bank, of which he was not only the first chairman of the board but also an active board member until a month before his death.

Fortunate he was in being the recipient of the love of three very special women—Harriet, the wife of his youth; Harriet Ann, his daughter; and Ardelle, his widow.

His fellow eye surgeons mourn his passing. He was a great friend, doctor, teacher, and a gentle man.

### Are Patients in Clinical Trials “Guinea Pigs”?

**W**E ALL WANT the best treatment for our patients. In the past, the best treatment method was one we had empirically chosen and utilized with some degree of success over the years. If a new method of treatment was described in our medical journals and it seemed to show somewhat better results than those reported earlier with our established treatment, we often shifted to the new alternative without the objective and reliable data that are demanded for non-clinical scientific inquiries, the “armchair” method for choice of treatment. However, we have been more willing, in recent years, to modify our practice on the basis of reported data from truly scientific trials when such information becomes available. We physicians now seem to be more receptive to scientific data than we were a few short years ago, and most of us accept the need for data regarding treatment choices from randomized prospective clinical trials.

Our next hurdle is acceptance of the fact that *all of us* must become players in this game—that of participation in clinical trials to determine the optimal treatment. Many physicians view these scientific clinical trials of the efficacy of alternative treatments for a clinical disorder (such as cancer) as an activity for others to conduct. These other individuals who are expected to provide these need-

ed answers might be in an urban medical center in our own country, or in some other country, clinical settings where often it is assumed incorrectly that the principles and ethics of medical practice and informed consent are less stringent than in our own practices. We want this new treatment information desperately, so that we can provide the best treatment for our patients, but the participation of physicians in these trials is limited to a very few.

It is stated frequently that cancer patients entered into well-designed randomized clinical trials are guaranteed the optimal available treatment. This is clearly true if the alternatives include both the standard therapy accepted as appropriate and one or more potentially beneficial approaches for which we have no solid data to favor them over standard “state of the art” treatments. Such clinical trials are designed on the basis of rational hypotheses and data and answer the question as to whether one treatment program is superior to another in response rate, duration of response, long-term survival, and freedom from potential short- or long-term toxicities. It is the only way to answer such therapeutic questions safely and with confidence.

A now classical trial, which began in 1969, is the National Wilms’ Tumor Study. One of the important initial questions posed for localized Wilms’

tumor was what role did actinomycin D therapy play after nephrectomy and administration of post-operative radiation to the tumor bed? Following surgery and radiation therapy, patients were randomly assigned to receive no further therapy or courses of actinomycin D for 15 months. The results of this national cooperative study definitively demonstrated the value of adjuvant actinomycin D therapy; 80% of patients receiving this drug were disease-free at two years as compared to 50% of the patients who were not. No anecdotal experience could match the scientific significance of this carefully designed and closely monitored clinical trial.

More recently, the treatment of osteosarcoma has become very controversial. Single institutions have opted to treat all patients with adjuvant chemotherapy after amputation, relying exclusively on historical information on patients who received no chemotherapy for comparison of results. The two-year relapse-free survival rates with single- or multi-drug treatment regimens have been in excess of 50%, significantly superior to historical experience in which the survival rates were less than 20%. However, with the advent of CT scanning to detect lung metastases early, historical data are no longer a valid comparison. The Mayo Clinic has recently reported a greater than 50% survival rate with amputation alone in a small series of patients.<sup>1</sup> How will this question about adjuvant chemotherapy for osteosarcoma be answered with confidence? A national clinical trial comparing chemotherapy to no chemotherapy after amputation has been started. However, physician and patient bias in treatment selection has unfortunately become a major problem in this study, compromising the interpretation and validity of the results. Unless this is rectified, the appropriate treatment of osteosarcoma will not be determined. Are patients entered on this sophisticated clinical trial "guinea pigs"?

The cancer mortality among children in the United States from 1950 through 1979, as evaluated by death certificate diagnosis, has revealed dramatic declines in the second half of the 30-year interval.<sup>2</sup> The number of deaths from 1965-1979 as compared with the number expected at 1950 rates fell 50% for leukemia, 32% for non-Hodgkin's lymphoma, 80% for Hodgkin's disease, 50% for bone sarcoma, 68% for kidney cancer and 31% for all other cancer. The reduction in mortality is attributed to the advent of effective chemotherapeutic agents, improved surgery and radiation therapy, and improved supportive care, used in a coordinated multidisciplinary fashion. These advances were made over a period of years, employing the clinical trial as the basic

scientific tool for treatment evaluation.

The validity of clinical trials depends on the adequacy of experimental design as well as the inclusion of adequate numbers of experimental subjects in these studies. No trials should be initiated that will not be able to provide reliable and meaningful data in a reasonable period of time. Trials are designed also to halt the random prospective treatment assignments when a scientifically valid answer to the initial therapeutic question is obtained, an approach that insures optimal treatment for the participating patient. The old concept that patients entered into clinical trials were guinea pigs receiving questionable treatment is certainly an invalid one in view of these procedures and the results of the numerous studies done to date.

How do all of these ideas impact on the practicing physician who is not working in a medical center where these clinical trials have been conducted in the past? For some trials addressing our common cancers, such as the National Surgical Adjuvant Breast Project trials relating to breast and large bowel cancers, community physicians and their patients already comprise a major portion of the clinical research activity. These trials studying adjuvant therapy approaches for these two cancers require large numbers of patients receiving primary treatment, more than can be treated in a few institutions. Community physicians definitely can and do participate in these trials with the coordinating leadership of cancer centers, universities, etc. The useful treatment answers that have been obtained by the NSABP trials thus far are a clear-cut result of this cooperative effort. More clinical research activity in the community is needed, however.

The type of clinical trial referred to above usually detects relatively small, albeit beneficial, differences in the treatment alternatives for some of our more frequent adult cancers. How about more infrequent cancers such as leukemia, childhood sarcoma or Wilm's tumor, or cancers requiring intensive treatment schedules that may be difficult for the physician who sees such a problem rarely? Major and exciting advances in the management of some of these cancers in children have occurred, partly as a result of two recent trends. The first is the growing tendency among individual pediatricians to refer these less frequent neoplastic diseases to medical centers where a larger clinical experience has accrued. The second advantageous trend is that of the development of truly national cooperative research protocols for improving our understanding of both the biology and the treatment of

these infrequently seen problems. It is now quite clear that most malignant disease in children, due to its rarity, should be referred to medical centers, both for providing optimal "state of the art" care and for providing therapeutic answers that ultimately will benefit future patients.

For adults, many cancers are frequent enough and familiar enough to practitioners that the investigational approach may extend to the community physicians as described with benefit for all. Less common cancer problems in the adult population might lead physicians to take a page from the pediatrician's book. These adult patients with less common cancers will benefit in many instances from referral to a center where a valid carefully controlled national clinical trial is in progress.

The bottom line for improving cancer care is clearly the well-controlled clinical trial and, one way or the other, today's cancer patients should be entered into such trials if at all feasible. We believe

that most physicians have learned that clinical research is a rewarding approach from the standpoint of improving treatment, and it is now our responsibility to educate our patients along these lines as well. They are certainly *not* guinea pigs but, instead, they are teammates in a broad program that is beneficial to all.

WALTER LAWRENCE, JR., MD  
HAROLD M. MAURER, MD

Massey Cancer Center  
Medical College of Virginia  
Richmond VA 23298

1. Edmondson JG, Green SJ, Ivins JC, Gilchrist GS, Creagen ET, Pritchard DJ et al. A controlled pilot study of high-dose methotrexate as post-surgical adjuvant treatment for primary osteosarcoma. *J Clin Oncol* 1984;2:152-156
2. Miller NW, McKay FW. Decline in US childhood cancer mortality: 1950 through 1980. *JAMA* 1984;251:1567-1570

## Physicians and Hospitals: Changing Roles

**M**ANY influences are forcing hospitals to compete for a larger share of the market. Increasing competition from peers and ancillary and allied health professional is impacting on physicians also. Hospitals have become the focal point of health care, thus changing the relationships between physicians and hospitals. We have to recognize that in the world of business, *health care is big business*. The past quasi-independent status of the medical staff in relation to the hospital will have to change, even though this was, in the past, probably beneficial to both the hospital and the physicians. The relationships between physicians and their hospitals have to be restructured.

Medical staffs and administrators will have to work together in the survival struggle; their behavior is going to have to be modified to become more efficient and cooperative to meet the need for interdependent relationships. One group can no longer operate without taking into consideration the needs of the other.

It is imperative that the medical staff continue to deal with credentials, utilization, quality assurance and discipline, and to serve as advisors to administrations and boards of trustees. If the medical staff chooses not to offer coherent opinions and advice on issues facing the hospital, then the hospital will be forced to make decisions without staff input.

The socioeconomic forces threatening hospitals and physicians are primarily external and demand, therefore, internal cohesiveness as a condition for survival. A strong medical staff organization is essential. The medical staff physicians have to speak with one voice regarding the priorities of needs. Better interpersonal relationships can be developed through better communications. One of the methods by which these needs are being met at a national level is the Hospital Medical Staff Section of the American Medical Association's House of Delegates. Since its formation in June 1983, 22 states have created such sections at the state level, and 13 others are in the planning stage.

At the annual meeting of The Medical Society of Virginia late last year in Williamsburg, a steering committee was formed to start a Hospital Medical Staff Section to sit with the Society's House. Virginia is 209 miles long and 452 miles wide and has approximately 133 hospitals, yet the needs being experienced by hospital medical staffs over the state are similar. The new state section will serve as a vehicle to address those needs and the changing roles of Virginia's hospital medical staffs.

CAROL S. SHAPIRO, MD

1940 Opitz Boulevard  
Woodbridge VA 22191

# WHO'S WHO

## IN VIRGINIA MEDICINE

In a reenactment of the voyage that brought the first English settlers to Virginia in 1607, the reproduction "Godspeed" is to set sail from England on April 30 with a crew of 12, including able-bodied seaman Jim Barton, aka **Dr. James E. Barton**, Williamsburg physician. Dr. Barton has been designated the ship's doctor, or "barber-surgeon", and although he will be the one to deal with any illness or injury that develops aboard the tiny vessel, over the long haul he'll be working the rigging alongside the other hands.

Dr. Barton will be at sea for two to three months as the replica Godspeed traces the 5,995 miles of the original ship's route. The adventure has the enthusiastic support of his four associates at the Williamsburg Community Hospital's emergency care center; they will cover for him while he's recreating American history. Dr. Barton has been eight years in the hospital's emergency service after graduating from the Medical College of Virginia.

All of the Godspeed's crewmen are, like Dr. Barton, volunteers. They range in age from 28 to 55 (Dr. Barton is 37), and they were selected from a group of 100 applicants by the ship's captain, George Salley, a NASA computer scientist from Gloucester whose sailing CV lists a flotilla of commands, including a 39-foot schooner. Dr. Barton was the only physician chosen; the other crew members include an un-

derwater archaeologist, a carpenter, an electrical engineer, a businessman, a statistician. Most are veteran sailors, but Dr. Barton had only five weeks of sailing experience on the Chesapeake Bay and had to do some concentrated catching up during the Godspeed's sea trials on weekends during the winter.

To get from Virginia to England, the 68-foot, wooden Godspeed was given a free ride aboard a commercial vessel, but it is to make the return trip entirely on its own, without escort ship or backup crew, sailing from England to the

Canary Islands, thence to Martinique in the Caribbean, on to St. Thomas in the US Virgin Islands, and finally to Cape Henry, Virginia.

The Navy gave Dr. Barton a list of medical supplies carried on its vessels; he trimmed it down to suit the exigencies of space and wound up with what he describes as a "well-stocked emergency room. It's got what we need to resuscitate people in just about every type situation." In the event of a serious emergency, he can radio Olney, Maryland, where there is a medical advisory service for ships at sea.



Shipmates: from left, Dr. James E. Barton; underwater archaeologist John D. Broadwater; and business exec E. B. Peter Meekins. Photo by Maurice Duke courtesy of the Jamestown-Yorktown Foundation.

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# VIRGINIA MEDICAL CLASSIFIED

*Virginia Medical classified ads accepted at the discretion of the Editor. Rates to Medical Society of Virginia members: \$15 per insertion up to 50 words, 25¢ each additional word. To non-members: \$30 per insertion up to 50 words, 25¢ each additional word. Deadline: 5th day of month prior to month of publication. Send to the Advertising Manager, 4205 Dover Road, Richmond VA 23221.*

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**VIRGINIA ARMY National Guard** is presently seeking physicians to perform routine physicals on a contract basis. In addition, any individual, hospital or clinic interested in renting treadmill pulmonary function and x-ray facilities on occasional weekends (to include qualified technicians) should send appropriate bids to VAPA-State Surgeon, Virginia Army National Guard, 501 East Franklin Street, Richmond VA 23219.

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# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

### HELP WANTED FOR JAMMED JAMBOREE

You'd think the dioxin scare at Fort A. P. Hill would have put a damper on the Boy Scouts' 75th anniversary jamboree July 24-30, but it seems only to have quickened interest in the quadrennial camp-out. Scout officials expect registration to exceed 25,000 Scouts (plus 2,800 troop leaders) and are hoping that plenty of Virginia physicians will volunteer for duty at the event. Twenty-three Virginia physicians helped out at the 1981 jamboree. This year, said a spokesman at Scout headquarters in Irving, Texas, "we'll take all the doctors we can get." Fort Hill, he added, is now "probably the safest place in the U.S."

The first physicians to sign up for 1985 jamboree service were Dr. James T. Edwards, Jr., Newport News, and Dr. David W. Muffleman, Hayes. They had a great time at the 1981 jamboree, they said, and are rarin' to go to this one. You, too, can go to the jamboree. Call or write Will Osburn at The Medical Society of Virginia, 4205 Dover Road, Richmond VA 23221, (804) 353-2721. He's in charge of the duty roster.

### NATURAL DEATH ACT STRIKES CHORDS

"Virginia's Natural Death Act was written for all of us," said the big, boldface headline leading off the ad in the Richmond Times-Dispatch of April 8. "Learn about it. Act on it." After explaining the Act's intent and illustrating with a case report, the ad made an offer: "If you would like a copy of the Natural Death Act Form, return the coupon in this ad to the Richmond Academy of Medicine. Once you have properly filled out the form, you must give it to your doctor."

This was the third in a series of "medical updates" inserted in the Times-Dispatch by the Academy (the two previous ads discussed DRGs and Medicare), but it was the first to include a coupon, and it struck chords--555 letters requesting 2,440 forms had come in one week after the ad appeared. Many were appreciative to a degree, i.e., "Thank you, thank you, I can't believe you are doing this for me." Some sent money to express their gratitude.

If you would like a copy of the Form, write to Va Med's Executive Editor at 4205 Dover Road, Richmond VA 23221. It follows the language approved by the Act and you can offer copies of it to your patients with confidence. Also available are reprints of the Physicians Guide to the Natural Death Act (Va Med 1983;110:370), a one-page summary of the Act's requirements and definitions.

### AMA POST TO DR. WOOTTON

For the first time, the American Medical Association's influential Council on legislation is to have a member from Virginia. He is Dr. Percy Wootton, Richmond, who has been President of The Medical Society of Virginia and chairman of VaMPAC and is now an alternate AMA delegate and chairman of the legislative and Vanguard Committees. The appointment was made last month by the AMA's Board of Trustees, whose vice chairman is Dr. William S. Hotchkiss, Chesapeake, Virginia.



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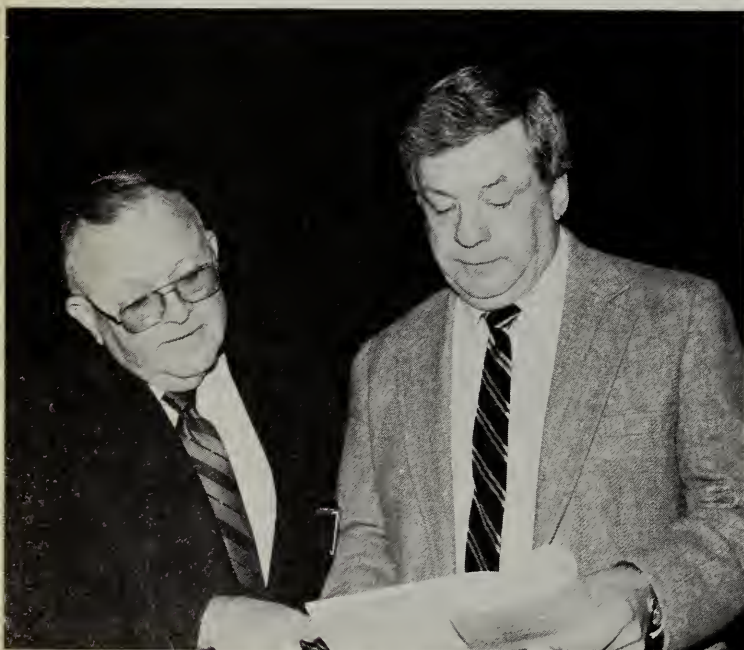


# Getting involved

**F**OR the second consecutive year, a program partnered by The Medical Society of Virginia and the Richmond Academy of Medicine brought physicians and state legislators together in Virginia's capital city. The setting was the short session of the 1985 General Assembly, where visiting doctors testified at committee hearings, met with legislators to express pros and cons on pending bills, watched committees deliberate, listened to debate in House or Senate. Sometimes the physicians came for the morning, sometimes for the afternoon; always they began with briefings by MSV and Academy staff over breakfast or lunch. As these pictures illustrate, MSV members from all around the state got involved with the legislative process.

On page 325 of this issue Dr. Percy Wootton writes about this year's legislation. Accompanying his commentary doctors who signed in at Capitol Square.

*Photographs by Katherine Wetzel (Dr. Vennart and Dr. Apostle), John Frischkorn (Dr. James Baker), and Reggie Jenkins (Dr. Bruce Baker).*



**Dr. George P. Vennart, Richmond, left, and Del. Joseph B. Benedetti (R-Richmond)**



Dr. James P. Baker appears at left below testifying before the Senate Courts of Justice Committee on behalf of SB 511, which decreed that in cases of asbestos-related disease, the statute of limitations begins on the date of diagnosis.



Dr. Bruce E. Baker, Fredericksburg, left, and Sen. John H. Chichester (R-Fredericksburg)



Dr. Thomas C. Apostle, Winchester, right, and Del. Alson H. Smith, Jr., (D-Winchester)



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## **Blue Cross And Blue Shield Of Virginia**

# WHO'S WHO IN VIRGINIA MEDICINE

Named to receive the 21st Annual Louis Obici Memorial Hospital Staff Award at the hospital's clinical conference last month was **Dr. William S. Hotchkiss**, Chesapeake, former Medical Society of Virginia president who is now a trustee of the American Medical Association. The award cited his "outstanding contributions to the medical profession."

**Dr. Steven M. Zimmet**, Arlington, was elected president of the American Lung Association of Northern Virginia at a meeting of the association's board of directors. He is a former president of the Virginia Society of Internal Medicine.

At the semi-annual dinner meeting of the board of trustees of the American Cancer Society, District of Columbia Division, **Dr. Charlotte P. Donlan**, McLean, was given the John T. Feeney Award for outstanding contributions in the service of cancer patients and their families. Dr. Donlan is a radiologist in private practice in the Washington metropolitan area.

He turned 80 recently, but **Dr. Richard B. Nicholls**, Norfolk, is still seeing gynecologic patients four days a week. He has, however, taken on an ob/gyn associate.

**Dr. Joseph C. Nuara** is the new president of the medical staff of Richmond's Retreat Hospital, and

**Dr. Harry W. Easterly** has been elected chief of staff at Stuart Circle Hospital, Richmond.

**Dr. William F. Gibbs**, Norfolk, has been elected to fellowship in the American Group Psychotherapy Association.

In Winchester, **Dr. Terry L. Sinclair** was elected president of the Winchester Medical Center's staff.

**Dr. Darlene E. B. Litton** is the new chief of staff of Lonesome Pine Hospital in Big Stone Gap.

New president of the medical staff at Smyth County Community Hospital in Abingdon is **Dr. Richard F. Hawkins, Jr.**

For his 20 years of service as chairman of continuing education at Johnston Memorial Hospital in Abingdon, **Dr. H. H. Pinkerton** was given a plaque honoring his outstanding contribution to the medical staff. New chief of the Johnston Memorial staff is **Dr. Geoffrey Larson**.

**Dr. Donald B. Nolan**, Roanoke, has taken office as president of the Virginia Neurological Society. Serving with him are **Dr. William O. Harris, Jr.**, Newport News, president elect; **Dr. Austin B. Harrelson**, Richmond, vice president; and **Dr. James E. Etheridge, Jr.**, Norfolk, secretary-treasurer.

Two Chesapeake physicians, **Dr. Pat L. Aulicino** and **Dr. Alireza Jamali**, have been inducted as fellows of the American Academy of Orthopaedic Surgeons.

More honors for **Dr. Edward W. Hook**, Charlottesville, whose accession to the presidency of the American College of Physicians was reported in these columns (Va Med 1985;112:78-79). He has been given the Founder's Medical Award of the Southern Society for

Clinical Investigation for "leadership in advancing medical research, teaching and academic principles." Dr. Hook, who is chairman of the Department of Internal Medicine at the University of Virginia, received the award at the society's 39th annual meeting in New Orleans.

**Dr. Stuart Ashman**, who is president and medical director of psychiatric hospitals in Norfolk and Virginia Beach, has been elected vice president of the National Association of Private Psychiatric Hospitals. Dr. Ashman is a past president of the Neuropsychiatric Society of Virginia.

**Dr. Michael T. Rapp**, McLean, was elected president of the Virginia Chapter, American College of Emergency Physicians, at its annual meeting early this year. To serve with him as vice president the members elected **Dr. Murray B. Welt**, Arlington.

**Dr. Richard A. Mladick** and **Dr. Richard L. Morris**, who practice plastic surgery in partnership in Virginia Beach, contributed two chapters to a textbook on the technique of suction removal of fat. Together they wrote a chapter titled "Alternative Patient Positioning and Pretunneling," and Dr. Mladick alone wrote "Lipolysis Combined with Facial Rhyectomy."

Newly elected fellow of the American College of Surgeons is **Dr. David R. Antonio**, Kilmarnock.

Newly elected to the board of directors of Blue Cross Blue Shield of Virginia is **Dr. Lennox D. Baker, Jr.**, Norfolk surgeon.

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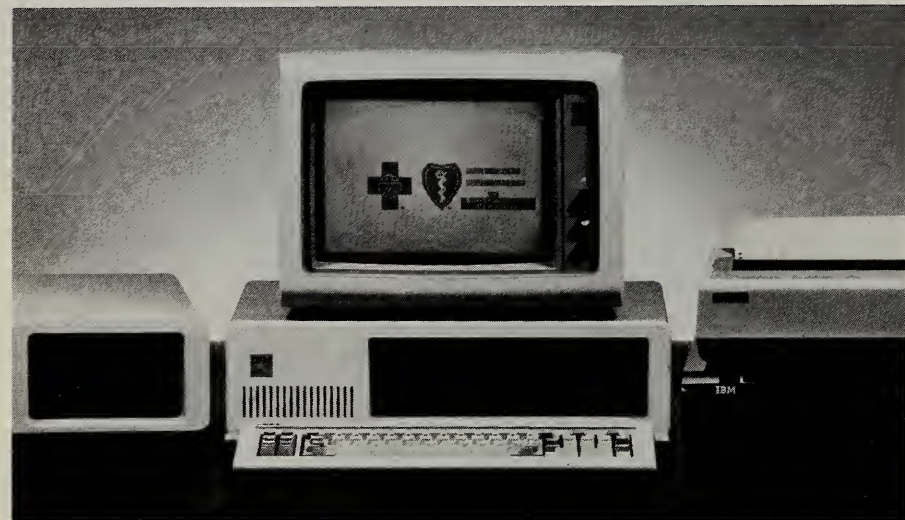
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## Cases From the Morgue

David K. Wiecking, MD, LLB, *Richmond, Virginia*

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Although the medical examiner's role is commonly identified with violent death, the investigating examiner finds as often that death was due to a natural disease process. These "natural" deaths may well portend legal proceedings, for which the examiner must make the medical record absolutely clear. Virginia's Chief Medical Examiner illustrates with 15 case reports.

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OVER the almost 40 years of its existence, the medical examiner system has provided medical interpretation of all violent and suspicious deaths in Virginia, including some highly publicized murders and several mass casualty situations, as well as a great number of accidental deaths on the highways, in the workplace, and in the home. It is a sad fact of modern life that sudden and violent death is such a frequent occurrence.

The medical examiners do not, however, see only obvious violent death. An equal number of cases turn out upon investigation to have been due to a natural disease process. Investigation of natural deaths is not the medical examiner's primary purpose, of course, but there are cases in which a person dies suddenly and unexpectedly from a cause that turns out to have been natural in origin, and there are other cases in which the death is obviously due to a diagnosable natural lesion but in

which circumstances of the death indicate that there may be some further legal developments requiring medico-legal interpretation. One of the important considerations for the medical examiner is to foresee such potential ramifications and to investigate the death, including if necessary ordering an official autopsy, in order that the medico-legal record be absolutely clear so that accident investigators, police, insurance investigators, lawyers, and others can pursue their claims intelligently.

The medical examiner as a trained physician is in a unique position to determine scientifically the role, if any, which the circumstances of the death played in the precipitation and the timing of the death. He can make a judgment as to whether an act of violence or injury contributed to the death. He can interpret the role of pre-existing natural disease toward the death. He can obtain specimens for analyses to determine whether extraneous intoxicants contributed to the death. Finally, he must make a medical decision about the ultimate cause of death, the contributory factors, and the relationship between them, and be willing to explain his findings and interpretations before the public. It is an important role and a necessary one in our Anglo-American system of civil and criminal justice.

Dr. Wiecking is Chief Medical Examiner for Virginia's Department of Health and is also professor of legal medicine at the Medical College of Virginia/Virginia Commonwealth University. Address correspondence to him at 9 North 14th Street, Richmond VA 23219.

The following case reports illustrate these facets of the medical examiner's role.

### **Deaths in the Workplace**

Persons who die while on the job, especially when operating machinery in a hazardous environment or near electricity, provide an endless source of potential litigation. Many such deaths are covered by worker's compensation laws, but that does not always mean that there will not be litigation as to whether the death was due directly to the conditions of the employment or an injury suffered on the job. Whether the death is due to a heart attack or to a heat stroke or to a subtle external injury or electrocution is a recurring question which can only be answered by close medical scrutiny of the body and of the circumstances in which the death occurred. Every death in the workplace should be documented with a view to future possible litigation, as well as for the improvement of safety measures at the site.

For instance, a 66-year-old male refrigeration machinery operator was found dead beside his control panel. There was a slight amount of blood about the head on the floor and a laceration on his forehead. It appeared that he had suffered a heart attack, but the question of electrocution or of head trauma was raised by the plant supervisor and also by the widow. The only way to answer unequivocally such speculation and to put the rumors to rest is to autopsy the dead body. The head laceration was found to be superficial and no evidence of electrocution was found. Also, examination of the control panel by a qualified electrician revealed no source of possible electrocution. Autopsy revealed severe heart disease. The death was therefore ruled to have been natural due to heart disease, and no contribution from external trauma was involved.<sup>1</sup>

Another case involved a 51-year-old milk truck route delivery man who collapsed while lifting and unloading a case of milk from his truck. He was hospitalized with a diagnosis of myocardial infarction and died some months later of his heart disease. Although there was no external violence related to his collapse, the issue of the work-related exertion to the precipitation of his collapse had to be decided by the Industrial Commission. The decision was that the exertion, being a requirement of his job, precipitated the death, which admittedly was due to natural causes, and that therefore the death was job-related and compensable. The accurate and complete medical record of the deceased was important in the just resolution of his death claim.<sup>2</sup>

### **Medical Complications of Remote Trauma**

It is important that the treating physician remember the cause-and-effect relationship between minor trauma weeks or months previously and the death of the patient. Deaths due to medical complications of even minor trauma should be reported to the medical examiner for definitive evaluation.

To illustrate, a 60-year-old man was involved in a minor fall and received fractures of both bones of the lower leg, which was put in a cast. He was otherwise doing well when suddenly about 14 days following the accident he collapsed and died. The obvious medical diagnosis was a massive pulmonary embolus, which fact was demonstrated at autopsy. This man died because of his accident, and his medical record should reflect that fact throughout the ensuing litigation and insurance settlements.<sup>3</sup>

Similarly, a 34-year-old man received a small caliber gunshot wound to the upper abdomen. He was treated surgically and was doing well when he suddenly collapsed and died six days later. Autopsy revealed a large pulmonary embolus occluding the main pulmonary artery. Medically, the death is directly traceable to the gunshot wound.<sup>4</sup>

It is hoped that every physician understands the relationship between such catastrophic events following even minor trauma. Similar considerations apply to deaths due to bone marrow or fat emboli following both long bone fractures or massive soft tissue injury, and delayed vascular ruptures following false aneurysm formation. An even more remote death involves sepsis and pneumonia following cutaneous burns, and urinary tract infection and generalized sepsis following traumatic quadriplegia. Some patients may survive for years following the precipitating trauma. Nevertheless, the death follows in a direct medical line of causation and should be considered to be traumatic in origin.

### **Death Due to Lack of Treatment**

The refusal to provide even rudimentary medical care to those unable to care for themselves is unacceptable in our society. The most obvious such groups are infants, the insane, and the incapacitated elderly. Deaths due to untreated disease in members of those groups may result in both civil and criminal litigation. Laws require the reporting of abuse or neglect which may be detected in such individuals as the following:

A husband and wife were convicted of reckless homicide in the death of their 26-day-old son, who died of untreated pneumonia after his parents relied on prayer to cure him instead of medicine. Jurors

deliberated just over two hours before returning the verdict.<sup>5</sup>

A Fundamentalist couple who prayed, fasted and quoted scripture over their dying infant daughter without calling a doctor was convicted of reckless homicide and child neglect. The 9-month-old daughter died of what a doctor called the worst case of meningitis he had ever seen.<sup>6</sup>

### Death Following Minor Trauma

A person may die of an obviously diagnosable natural disease but may have received some minor trauma in the hours or days preceding death, which may raise suspicions in the community and its officers as to whether the death in fact was due to external violence. In such a case the circumstances leading up to death are important and should be further investigated, as in the following case report.

A 47-year-old female was found dead at home one Sunday morning. There were several purple and dusky-red contusions over the torso. The woman and her husband were known to quarrel and to be chronic alcoholics. The police arrested the husband and charged him with killing the woman by beating her. Autopsy revealed no significant trauma to the body. The bruises were all medically insignificant and were obviously related to her cirrhotic liver and her chronic alcoholic condition. There was no evidence medically that the husband had killed her, although he admittedly may have knocked her around a bit. The prosecutor was notified of the lack of medical findings sufficient to support a homicide case; the case was dropped. Thus justice was served.<sup>7</sup>

On the other hand, it is sometimes determined that the minor antecedent trauma was a significant contributor to the death. For instance, a 60-year-old male with a known cardiac history was serving as a custodian in a state mental hospital when he was jumped by a patient and beaten slightly about the face. He was not knocked out. There were abrasions but no lacerations. He assisted in subduing the patient, then in a few minutes complained of chest pain. He was sent to the infirmary, where he had obvious signs of a coronary attack, and he died about 40 minutes after the episode with the patient. The cause of death was medically quite clear: acute coronary insufficiency. It was also obvious that something had to be done by the authorities about the unprovoked fight. The prosecutor needed to know specifically whether the attack contributed to death, and he needed medical documentation and clear-cut opinion as to the sequence of events. Only by autopsy can such information be obtained, and,

when correlated with the decedent's medical history, a clear medical opinion can be formulated of the role of the attack in the death. In this case it was apparent that the attacker took the risk of assaulting a debilitated man—"the tort-feasor takes his victim as he finds him" in classic law. The attacker was convicted of manslaughter for causing the death of this cardiac cripple by inducing another heart attack in him.<sup>8</sup>

In a similar case, a 52-year-old male bus driver with a known coronary and hypertensive history got into an argument with a recalcitrant passenger, and a "pushing and shoving" match ensued. The bus driver keeled over and died about five minutes later. His coronaries looked just as bad as those of the preceding cases, and his history was unequivocal. The assailant was indicted and tried for assault and homicide.<sup>9</sup>

Occasionally there may not be any physical injury to the deceased, the precipitating episode being purely psychological in manner, as in the following three cases.

A 72-year-old man was playing dominoes with his friend when two young men burst in upon them and held them up with a display of guns. There was no physical contact between the attacker and the victim. A few minutes after the robbers left, the decedent complained of chest pain and weakness and was taken by ambulance to the hospital, where he promptly died with a classic heart attack by signs and symptoms. The obvious question was the contribution to his death, if any, of the holdup. Autopsy revealed severe coronary disease and old myocardial scars, and his old hospital chart confirmed his poor cardiac condition. The attacker was indicted and prosecuted for murder under the felony-murder doctrine and was convicted. The interesting aspect of this case is that there was no physical contact between victim and attacker, a point which the lawyers deem very important to a "physical" assault case. Here there was ample evidence of emotional and mental assault causing the terminal coronary failure, a sequence of events well known in the medical world. There is no question from the medical standpoint of the terminal event in this old man. The medical testimony was essential in seeing that justice was done.<sup>10</sup>

Three men convicted of causing a 68-year-old man's fatal heart attack when they broke into his rural home were sentenced to a year in jail for scaring the man to death. According to testimony, the three broke into a remote farmhouse in Eastern Texas on March 23, 1983, after the robbery of a local convenience store. Prosecutor said the dece-

dent suffered a heart attack while trying to load his gun. According to testimony, he had a history of heart problems and was crippled by arthritis.<sup>11</sup>

A 67-year-old woman who suffered a fatal heart attack in court as she described how she was robbed at gunpoint was ruled a homicide victim by Oklahoma's Chief Medical Examiner. "She was scared to death", said Dr. Fred Jordan. "To say that she simply died of a heart attack is not telling the story honestly or accurately." She died of "acute coronary insufficiency", Dr. Jordan said, as the result of her nervousness and fright at taking the witness stand.<sup>12</sup>

### Deaths Involving Public Officials

The death of any person during police custody, police chase, a hostage situation, public confrontation, and similar situations inevitably invites public examination, accusation, explanation, and sometimes litigation. It is important that every such death, no matter how obviously natural in medical causation, be thoroughly investigated from both the medical and the legal aspects. Only with a complete medical record and interpretation can the public investigation proceed in a knowledgeable manner.

To illustrate, a 29-year-old male with a history of epilepsy was in the state prison farm for drug offenses. He went into status epilepticus and was taken to the farm infirmary and then to a regional hospital but persisted in his epileptic fits and died after about ten hours of seizures. There were allegations of illicit drug use by the decedent in prison and of physical abuse of him by prison officials. At autopsy, it became clear that there were no signs whatsoever of physical injury to the man. Toxicologic analysis revealed therapeutic levels of anti-epileptic medications but no non-prescribed drugs in his system. The cause of death was status epilepticus. The medical facts were placed clearly on the record, and allegations of overt abuse by the prison officials were quashed.

There was, however, continuing and rancorous debate about the level of medical care available to inmates at that institution; and whether in this particular case the man was treated rapidly and thoroughly enough, a legitimate question under the circumstances, which caused a sweeping review of prison medical coverage and ensuing improvements. There was no crime in the usual sense involved in this prison death, but there was a very significant public policy question raised by it which spilled over into public debate and resulted in tense moments for the prison officials. The medical facts were clear upon the record and formulated one of

the bases for the factual and accurate discussion and resolution of this incident.<sup>13</sup>

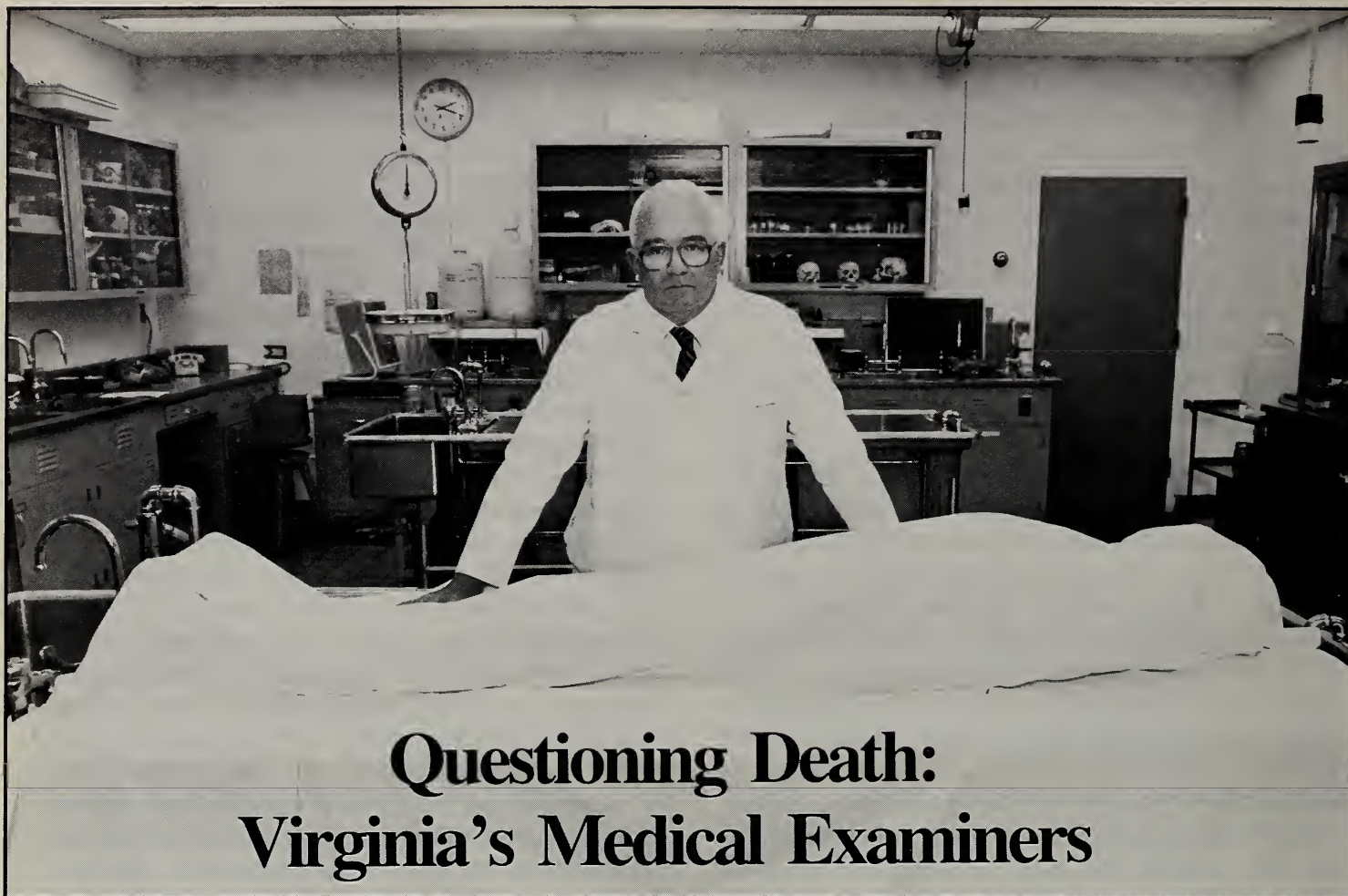
Deaths in prison, jail, police custody and detention cells merit the highest level of both medical and legal investigation. As an example, a 59-year-old male was seen to be behaving in a strange and paranoid manner shortly before his speeding car was detected by the police, who gave chase. When the officers finally stopped him and were removing him from the car, he suddenly collapsed and was dead on arrival at a nearby emergency room. Personal history of hypertension and mental problems was elicited from his relatives, while autopsy showed severe heart disease. No evidence of lethal external violence was present. It was clear that this man died from his heart disease, but the circumstances of the police chase and the inevitable public reaction to his untimely death merited complete medical evaluation of the circumstances.<sup>14</sup>

In another case, a 33-year-old male fireman collapsed at the scene of a structural fire and died soon thereafter. Autopsy revealed severe heart disease, acute myocardial infarction, and a negative blood carboxyhemoglobin. This man had succumbed to his heart disease, which in firefighters is a compensable disease. Additionally, it was determined that the structural fire had been set purposely, that is, it was arson, and the arsonist, who was apprehended, was later convicted not only of arson but of murder for causing the death of this firefighter, albeit the death technically was due to natural disease. The importance of the circumstances surrounding the death is critical.<sup>15</sup>

### Summary

The vast majority of deaths in our society result from natural disease processes. Most of these deaths are not controversial and have no public legal consequences other than the settlement of estates and the keeping of vital statistics. Once in a while, however, a death which is obviously natural in medical understanding carries with it the significant possibility of subsequent legal problems. Deaths in the workplace; associated with possibly significant but minor trauma; in specially protected populations such as very young and very old; related to a criminal act; or occurring in police custody, jail, or other high visibility public activity will all require medico-legal evaluation. Physicians treating patients in such circumstances are encouraged to understand the greater ramifications of such a death and to report such deaths to the appropriate authorities for possible investigation.

*References on page 314*



## Questioning Death: Virginia's Medical Examiners

Tim Wright

By GARY HEINE

**T**HE investigation of deaths defined by law as subject to public inquiry is conducted in Virginia by 400 physicians across the state who report to the Medical Examiner Division of Virginia's State Health Department. In 1984, they investigated the deaths of 7,000 persons who died in Virginia, not infrequently developing medical evidence that proved pivotal in legal proceedings.

There are four district offices of the medical examiner system in Virginia. They are headed by these

Gary Heine was graduated in 1984 from Virginia Commonwealth University, where he majored in mass communications, and is now a medical student at the University of Louisville.

deputy chief examiners: in Richmond, Dr. Marcella F. Fierro; in Norfolk, Dr. Faruk B. Presswalla; Roanoke, Dr. David W. Oxley and Dr. William Massello, III; and in Fairfax, Dr. James C. Beyer and Dr. Gregory P. Wanger. These district offices also provide facilities for toxicological and pathological services to aid the examiners.

The Chief Medical Examiner, Dr. David K. Wiecking, oversees the entire system from the Richmond district office. An affable but strong administrator, Dr. Wiecking is above all a pathologist. He spends each morning in the morgue with his staff, taking his turn at the autopsy tables, bringing to bear on puzzling cases his 13 years of experience as Chief.

An act of Virginia's General Assembly established the medical examiner system in 1946 to replace

the old coroner system. The coroner was an elected official, subject to the changing winds and pressures of politics. Usually, the coroners had little experience in pathology or toxicology and, in fact, weren't even required to be physicians.

The office of the Chief Medical Examiner is in the State's Consolidated Laboratories Building at 9 North 14th Street in Richmond: one floor for the administrative offices, a classroom and meeting rooms, and in the basement the morgue and laboratory facilities. Dr. Wiecking directs the operation of the system from his first-floor office, surrounded by medical and legal texts. There he talked about the system he directs.

"When the Virginia Advisory Legislative Council studied the coroner system in the early '40s, it

◀ Shown opposite in the Richmond morgue is Chief Medical Examiner David K. Wiecking. To see 48 other medical examiners, turn the page.

found that by instituting a medical examiner system, Virginia could bring a needed uniformity to its death investigations," Wiecking explained.

So the 100%-state-funded medical examiner system was started with the establishment of the Richmond district office in 1946, the Norfolk office in 1957, Roanoke in 1967 and Fairfax in 1972. Today the Virginia system is much admired for its high-quality investigative work. Why?

"For three reasons, really," Wiecking said. "First, our investigations and documentation of cases are now statewide in scope. For example, a case in Scott County gets the assistance of the same expertise as a case here in Richmond. All benefit from the same labs and technical equipment, as well as the experience of our forensic pathologists.

"Second, the medical examiner system takes death investigations out of the realm of partisan politics; no one is elected as in the old coroner system. So the key people—the county and city medical examiners—are all physicians with a high overall level of competency and beholden to no constituency.

"Third, the state agencies we work with have improved their support and technical services greatly. For example, in 1972 the Bureau of Forensic Sciences was established within the Department of Consolidated Laboratory Services. We work very closely with the Bureau's toxicology and serology labs, here and in their satellite labs in the other district offices. This has been a significant boon for us and for Virginia criminal investigations."

The Chief Medical Examiner can

appoint any Virginia-licensed doctor of medicine or osteopathy to a three-year term as a medical examiner. Most medical examiners are general practitioners in private practice who fulfill their responsibilities on a part-time basis.

The six deputy chief medical examiners and Chief Medical Examiner Wiecking are certified forensic pathologists and work full time in the medical examiner system. A sixth forensic pathologist works in the Fairfax office.

Certification in forensic pathology requires a five-year residency in pathology and then one year in medico-legal or forensic pathology. Certification comes after passing the examination of the American Board of Pathology and an additional examination covering medico-legal pathology.

"The one-year forensic pathology residency takes a regular pathologist and teaches him or her how to do autopsies on victims of violence and how to collect evidence and specimens from the body. You learn how to talk with police, lawyers and the families of the deceased. You go to crime scenes to gain experience and learn how to document cases carefully and keep good records, which is very important. Then you're taught how to have confidence in court and be an expert witness," Wiecking said.

Besides receiving his medical degree from Johns Hopkins Universi-

ty, Wiecking received a law degree from the University of Virginia. Although it is not necessary to have a law degree to be a medical examiner, Wiecking believes it widens his interests and gives him more varied experience and the knowledge to do his job better.

"In court, in dealing with lawyers and law enforcement personnel, I can sense what they're after, what they're looking for. I can understand lawyers and don't have any antagonism towards them. This helps lead to a mutually beneficial transaction for all of us," he said.

**H**ow does Virginia's medical examiner system work?

"At the local level, if a city or county medical examiner is called on to investigate one of the five types of deaths we're concerned with, he or she will examine the body, take a blood sample and make a diagnosis of cause of death. Basically, they'll do a physical exam and diagnosis, but they have the statutory authority to order an official autopsy when it is considered necessary," Wiecking said.

If the local medical examiner decides that an autopsy is needed, the body will be sent to one of the four district offices, where the attending forensic pathologist will perform the examination. This is where the medico-legal training comes into use and where the differences be-

### These deaths must be examined

The State of Virginia asks its medical examiners to investigate death 1) due to trauma or violence; 2) of suspicious, unusual or unnatural cause; 3) occurring in prison, jail or police custody; 4) of "unexplained or unexpected" nature.<sup>1</sup> The medical examiner is also called in when a body is to be cremated or buried at sea.

Official autopsies are ordered at the discretion of the medical examiner charged with investigating a death. In general, they are considered necessary when there are any of these associated circumstances: homicide, child abuse, hit-and-run driving, imprisonment, narcotic drug overdose, poisoning.



Thomas L. Williams

Gathered together for this group portrait are 48 medical examiners from over Virginia and their boss, Chief Medical Examiner Wiecking. The occasion was The Medical Society of Virginia's annual meeting late last year at the Williamsburg Conference Center.

1. David K. Wiecking, MD
2. Russell N. Snead, MD, Columbia



3. Margaret A. Pennington, MD, Buckingham
4. Walter A. Porter, MD, Hillsville
5. Wendell E. Malin, MD, Wytheville
6. Paul C. Pearson, MD, Warsaw
7. Charles O. Barclay, Jr., MD, Portsmouth
8. Charles B. Mundy, MD, King George
9. Richard B. Bowles, MD, Mathews
10. Raymond S. Brown, MD, Gloucester
11. Marcella F. Fierro, MD, Richmond
12. John H. Thomas, Jr., MD, Greenville
13. Robert J. Fierro, MD, Richmond
14. Charles H. Crowder, Jr., MD, South Hill
15. Joshua P. Sutherland, Jr., MD, Grundy
16. Faruk Presswalla, MD, Norfolk
17. James Guy Price, MD, Norfolk
18. Meyer I. Krischer, MD, Norfolk
19. John H. Judson, MD, Arlington
20. Edward V. Brush, MD, Lexington
21. William B. Bishop, MD, Lawrenceville
22. Robert D. Ailsworth, MD, Keysville
23. William E. Moody, MD, Scottsville
24. Girard V. Thompson, MD, Chatham
25. Munsey S. Wheby, MD, Charlottesville
26. Alfonso Lombana, MD, Farmville
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33. Jesse J. Bates, MD, South Boston
34. Beryl H. Owens, MD, Rose Hill
35. Donald F. Fletcher, Jr., MD, Atlantic
36. Malcolm Tenney, Jr., MD, Staunton
37. Robert L. McCorkle, MD, Tappahannock
38. Richard F. Clark, MD, Hampton
39. Louis D. Parham, MD, Hampton
40. James H. Smith, MD, Christiansburg
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43. N. Broadus Gravatt, MD, Kilmarnock
44. Maurice S. Rosenberg, MD, Williamsburg
45. E. W. Bosworth, MD, Onancock
46. Edmund M. Henderson, MD, Nassawadox
47. B. F. Jamison, MD, Smithfield
48. Juan F. Rios, MD, Gate City
49. Richard R. Honabue, MD, Williamsburg



tween a medical examiner autopsy and a hospital autopsy are seen.

"The purpose of a hospital autopsy is to examine a dead body to document disease, the course of medical treatment, or medical research. Permission of the deceased or the next-of-kin is needed to perform this kind of autopsy," Wiecking explained.

"For a medical examiner autopsy, however, the permission is statutory; we don't need the consent of the next-of-kin. The purpose is to document the cause of death; to recover any physical evidence from the body; and to obtain blood, urine or tissue samples for toxicological analysis to detect poisonings or drugs that may be present. Then we can form a medical opinion of the events surrounding death."

The toxicology samples are analyzed in the Bureau of Forensic Science Laboratories, which is located one floor up in the Richmond office and has branch offices in the other three district offices.

The medical examiners also work closely with local, state and federal law enforcement agencies.

"Of course we work with the Health Department in the administration of the system and with Vital Records in the documentation of death certificates," Dr. Wiecking explained. "And we might work with the Federal Aviation Agency, or the Consumer Product Safety Board or the Drug Enforcement Administration."

"That's one of the pleasures of this job—meeting lots of interesting people," Wiecking added. "Interesting folks doing a great job."

In the basement morgue in Richmond a large stainless steel refrigerator holds bodies on steel carts pending autopsies or lab results. There is room for extra bodies in case a major disaster with multiple fatalities should occur in the area. Next door to the refrigerator is a

long, cement-block autopsy room with several steel tables connected to sinks, where the autopsies are performed. Also in the basement are x-ray facilities and another laboratory where autopsies are performed on decomposed bodies.

Every year there are several one-day workshops to which all Virginia medical examiners are invited. Also invited are law enforcement officers, funeral directors and rescue squad workers. The workshops bring the participants up-to-date on technical topics of medico-legal investigation.

Other teaching sessions are sponsored for groups as varied as insurance investigators, on, for example, how to inquire properly into fatal situations or recognize poisonings; arson investigators, on how to study burned bodies for attempted concealment of lethal injuries; or emergency room personnel, on how to recognize deaths requiring medical examiner attention and how to preserve evidence. The Office of Chief Medical Examiner also publishes a bi-monthly Medico-Legal Bulletin, with Virginia mortality data and trends and articles on such aspects of forensic investigation as examination of the rape victim.

**T**HERE have never been enough forensic pathologists, according to Wiecking. Pathologists usually go into higher-paid hospital pathology.

"We don't really have much contact with medical students," he said. "We have an elective month's rotation for seniors, if they want it. And we do a half-day for juniors on medical jurisprudence issues, like malpractice."

"This just isn't a glamour speciality of medicine—it's a quieter speciality. We're not seeing advances in this field as much as in others. Our advances come in peripheral areas of criminality—anal-

ysis of tiny paint chips in wounds with the electron microscope or studying the ultrastructure of wounds to determine type or origin of injuries. And the blood-matching that goes on in the serology labs has come about because of advances in transplant technology.

"One of the persistent medical problems of forensic pathology is determining the exact moment of death. There have been some advances in clinical chemistry tests for greater exactitude in this, but there is just no money in this kind of research. There is no research going on in the United States in forensic pathology as there is in the clinical fields of medicine."

Even with all the new supporting analytical techniques available to the medical examiner, the system still depends in large part on the older, simpler methods of medical reasoning and pathological dissection and analysis. But the old and the new are forming a powerful partnership in forging new paths in medico-legal death investigation. ■

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#### WIECKING/CASES cont'd from p 309

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# Granulomatous Bone Marrow Disease in Virginia: Study of 50 Cases

Robert M. White, MD, and  
Charles L. Johnston, Jr., MD,  
*Richmond, Virginia*

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In a study of 2,154 bone marrow biopsies at one of Virginia's large teaching hospitals, the authors identified granulomas in 50. The most common etiology was *Mycobacterium tuberculosis* (48%). The lesions occurred in all age groups, with no racial or sexual predilections, and their prognostic value appeared to be limited.

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The occurrence of granulomas in bone marrow biopsies is infrequent. The overall incidence in reported series has been placed at 1.23%.<sup>1</sup> A pathology report of granulomas in the marrow obligates the clinician to consider a wide range of differential diagnoses to establish an etiology. Pease in 1956 reported the first large series of such cases.<sup>2</sup> Since then, the known list of causes has expanded.

This study reports our clinicopathologic experience from one institution and summarizes the known etiologies as derived from previous studies in the English literature.

## Materials and Methods

All cases of bone marrow granulomas reported between May 1973 and November 1982 were obtained from the files of the surgical pathology department of the Medical College of Virginia. The aspirates and biopsies had been obtained from the

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posterior superior iliac crest by standard sterile technique using a Jamshidi needle. The core biopsies were retrieved and reviewed to confirm the presence of granulomas. A granuloma was defined as "a compact (organized) collection of mature mononuclear phagocytes, which is not necessarily accompanied by accessory features such as necrosis."<sup>3</sup> In addition to hematoxylin and eosin (H and E), Ziehl-Neelsen and periodic acid-Schiff-stained (PAS) tissue sections were obtained in each case and examined for acid-fast bacilli (AFB) or fungal organisms, respectively. The marrow aspirates were also retrieved and reviewed. Using a standard format, each patient's chart was reviewed for the chief complaint(s), positive physical findings, laboratory and radiologic findings, final culture results and discharge diagnosis.

## Results

There were 25 male and 25 female patients; 34 were black and 16 were white. The mean age was 54.9 years with a range of 22 to 88 years. The age distribution was fairly evenly spread between the third and seventh decades. Indications for biopsy could be divided into two major categories: 1) confirmation of a clinical impression; 2) determination of the etiology of a specific finding. The most common indications were either to support the clinical impression of tuberculosis (ten cases) or to determine the cause of fever of unknown origin (11 cases).

The most frequent chief complaints were cough (20 cases), fever (18 cases), weight loss (17 cases) and dyspnea (eight cases). Common positive physical findings were emaciation (eight cases), rales or rhonchi (seven cases), fever (six cases), decreased breath sounds (six cases), lymphadenopathy (five cases) and hepatomegaly (five cases). Hematological abnormalities most commonly noted were an elevated sedimentation rate (66%), a hemoglobin level below 12 gm/dl (62%), and the presence of toxic granulations in the polymorphonuclear leukocytes (34%). Sixty percent of the patients had an abnormal chest x-ray on admission; most of these demonstrated a parenchymal infiltrate (32%).

The histopathologic features of the granulomas were compared for each disease category. Careful comparison showed the histopathology to be non-specific. This is illustrated in Figure 1. The granulomas were located in both paratrabecular and non-paratrabecular locations, except for the patients with non-Hodgkin's lymphoma and with Hodgkin's disease; in both these conditions the granulomas were only nonparatrabecular.

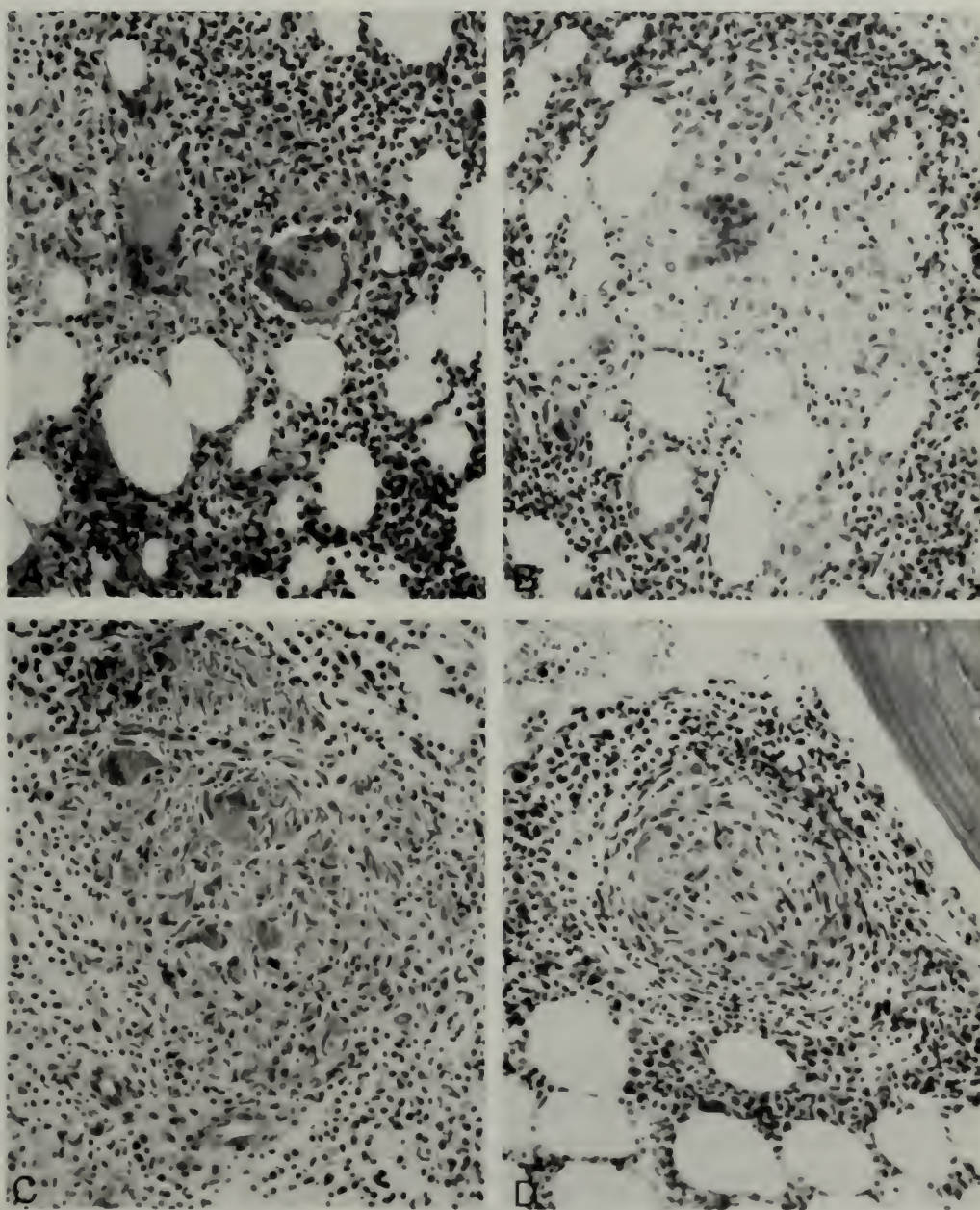
The size of the granulomas varied greatly. Langhans giant cells were identified in all categories, but surprisingly, no Langhans giant cells could be identified in seven of the 24 tuberculosis cases. Fibrinoid necrosis was present in 12 biopsies, ten of which were associated with tuberculosis. No polarizable material was seen in any of the granulomas, and no lipogranulomas or "reticulohistiocytic" granulomas were identified. Only one case exhibited concurrently a primary disease process and granulomas in the marrow.

Twenty-four (48%) of our cases were found to be associated with tuberculosis. In 19 of these, *Mycobacterium tuberculosis* was cultured from at least one source (sputum, effusion, urine or marrow aspirate). Five additional cases were attributed to

tuberculosis, and these five could be divided into two groups: 1) three cases in which cultures were negative but in which acid-fast bacilli were identified in the granulomas, and 2) two cases which were biopsy- and culture-negative for acid-fast bacilli but which are included as tuberculosis cases because the patients responded to appropriate therapy for tuberculosis. Both sputum and marrow aspirate cultures were obtained in all 24 cases. Sputum specimens yielded the highest rate of isolation of *M tuberculosis* (15 cases), and marrow aspirates had the lowest recovery rate (three cases).

Marrow aspirate smears were available in 44 cases (88%). These showed either a nonspecific, reactive marrow (42%) or a normal marrow (22%). Also 12 aspirates (24%) provided a more specific

Fig. 1. Comparison view of granulomas: A, upper left, in tuberculosis; B, upper right, in non-Hodgkin's lymphoma; C, lower left, in Hodgkin's disease; D, lower right, in sarcoidosis. There is no diagnostic specificity to the patterns.



diagnosis, including pancytopenia (three cases), iron deficiency anemia (two cases), megaloblastic anemia (two cases), anemia of chronic disease (two cases), and one each of leukemic infiltrate, lymphomatous involvement of marrow and Gaucher's disease. Clumps of histiocytes were not seen in any aspirate, and thus the diagnosis of granulomatous disease could not be confirmed on the aspirate alone.

Review of the final diagnoses after all cultures were reported showed tuberculosis to be the most common diagnosis (48%). The remaining cases reflected a diversity of diagnoses. These included non-Hodgkin's lymphoma (four cases), Hodgkin's lymphoma (three cases), sarcoidosis (three cases), granulomatous hepatitis (three cases), advanced carcinomatosis (two cases), and 11 miscellaneous cases. Alcoholism was cited in only three discharge summaries, yet heavy alcohol consumption was documented in 15 cases.

### Discussion

The introduction of closed needle techniques has improved the diagnostic value of the bone marrow biopsy.<sup>4-6</sup> Prior to the availability of closed needle techniques, marrow granulomas were identified primarily in clot preparations derived from aspirated material. The first large series in the English language literature was that of Pease, who reported in 1952 on clot preparations from 50 aspirated marrows.<sup>7</sup> She found marrow granulomas in cases of tuberculosis, sarcoidosis, lymphoma, histoplasmosis, infectious mononucleosis and granulomatous hepatitis. In 1954 Hamilton reported on marrow granulomas in association with brucellosis, and he stated the histopathology of the granulomas was not specific for brucellosis.<sup>8</sup> In 1956 Pease reported an additional 100 cases associated with the same conditions as she previously reported. In addition she found marrow granulomas associated with multiple myeloma, lupus erythematosus, subacute bacterial endocarditis, hemolytic anemia, erythema nodosum, "essential" thrombocytopenic purpura and several miscellaneous conditions. She came to the conclusion that "unless a specific organism can be identified in a granulomatous lesion, there are no diagnostic features characteristic of a definite disorder."<sup>2</sup>

Marrow granulomas have been reported in association with Hodgkin's disease.<sup>9</sup> Such granulomas are not part of the malignant process and are viewed as a reaction to the malignancy.<sup>10,11</sup> These granulomas may correlate with improved survival rates for Hodgkin's patients for all stages of the disease.<sup>12</sup>

Brunning and McKenna have suggested that marrow granulomas seen in non-Hodgkin's lymphoma may be a manifestation of altered delayed hypersensitivity.<sup>13</sup> Thus, the significance of bone marrow granulomas in cases of non-Hodgkin's lymphoma remains an enigma. Also, bone marrow granulomas have been recently reported in cases of acute lymphoblastic leukemia.<sup>14</sup>

Infectious diseases associated with marrow granulomas include shingles, Q fever, cytomegalovirus hepatitis, leprosy, syphilis, typhoid, leishmaniasis, tularemia, glanders, cryptococcosis, paracoccidioidomycosis, coccidioidomycosis, toxoplasmosis, Rocky Mountain spotted fever, and diseases caused by *Saccharomyces cerevisiae* and *Mycoplasma pneumoniae*.<sup>1,15-20</sup> Nearly one-half of our cases were found to be due to *M tuberculosis*. Sputum specimens yielded the highest organism recovery rate (78.9%), and marrow aspirates yielded the lowest (15.8%). In ten of the 24 tuberculosis cases, at least one acid-fast bacillus was identified in a granuloma with acid-fast staining. Disseminated histoplasmosis is felt to be the most important fungal disease causing marrow granulomas in the United States.<sup>21</sup> One of our cases grew *Histoplasma capsulatum* from the marrow aspirate and from lung tissue obtained by open biopsy. All biopsies were negative for fungal organisms by PAS stains.

Some authors have related marrow granuloma formation to chemical hypersensitivity reactions.<sup>22-24</sup> For example, beryllium has been reported to cause sarcoid-like granulomas in the marrow.<sup>25</sup> Two recent reports discussed a new syndrome of an acute eosinophilic interstitial nephritis and associated marrow granulomas.<sup>26,27</sup> The significance of this association is not clear. Swerdlow and Collins state that "lipid granulomas are the most frequent type of granuloma found in the marrow."<sup>21</sup> They quote a figure of 6% of routinely sectioned marrows. These granulomas, seen in normal marrow, do not carry the same diagnostic connotations as true histiocytic granulomas.<sup>28</sup> We identified no lipid granulomas; the reasons for the difference are not clear.

Closed needle biopsy material has certain advantages: 1) more material is obtained, 2) less artefact is produced, and 3) architectural relationships are preserved. We identified no clear-cut histologic pattern which correlated with a particular etiology, and we were unable to identify granulomas in aspirated material. In 36 cases (72%) an explanation for the presence of the granulomas was satisfactorily determined. These included the cases of tubercu-

losis, non-Hodgkin's lymphoma, Hodgkin's disease, sarcoidosis, drug-associated fever (sulfonamide), and histoplasmosis. In the other cases, the etiologies remain unknown.

The literature is vague about the prognostic significance of marrow granulomas. In this series we observed that the occurrence of marrow granulomas usually did not correlate with any particular prognosis. Instead, the primary disease and its response to therapy determined the prognosis.

## Summary

We have reviewed 50 cases of bone marrow granulomas collected at a single institution over a 9½-year period. We conclude: 1) Bone marrow granulomas are an infrequent finding (2.3% in this series). 2) In the absence of an identifiable organism the histology is nonspecific. 3) Bone marrow granulomas occur in a wide range of clinical presentations. 4) *Mycobacterium tuberculosis* is the most common etiology in Virginia. 5) When bone marrow examination is done in cases of suspected bacterial or fungal disease, appropriate culture of the marrow aspirate is indicated. 6) Careful workup will allow an etiology to be established in the majority of cases (72% in this series). 7) The prognostic significance of marrow granulomas remains unclear in many instances.

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# ABSTRACTS

*These abstracts derive from the annual meeting of the Virginia Surgical Society on May 4-5 in Williamsburg. Dr. H. H. Newsome, Jr., Richmond was program chairman.*

**Bypass for Ileo-Femoral Venous Obstruction.** Robert G. Gayle, MD, Jock R. Wheeler, MD, Roger T. Gregory, MD, and Stanley O. Snyder, Jr., MD, *Norfolk*.

Femoral to femoral venous bypass for chronic iliac and common femoral vein occlusion is reviewed. The use of saphenous vein, expanded polytetrafluoroethylene (PTFE) and temporary arteriovenous fistula are discussed. Four cases are presented. Three with externally supported PTFE were performed in conjunction with temporary arteriovenous fistula. These grafts are patent at 22 months, 15 months and 1 month postoperatively. The first patient spontaneously occluded the fistula. The second patient underwent ligation of the fistula four months postoperatively. These patients report good relief of symptoms. A single patient underwent saphenous vein bypass without relief of symptoms despite a patent graft at 6 months. Femoral to femoral venous bypass with externally supported PTFE in conjunction with temporary arteriovenous fistula appears to offer some benefit in the treatment of chronic ileo-femoral venous occlusion.

**Primary Gastric Lymphoma: Problems in Staging and Management.** R. E. Jones, MD, S. Willis, MD, C. Hess, MD, and H. J. Wanebo, MD, *Charlottesville*.

Primary gastric lymphomas represent 25%-50% of all primary extranodal lymphomas and frequently mimic peptic ulcer disease. Preop diagnosis is difficult and intraoperatively these lesions are misdiagnosed as gastric cancer. This raises questions about intraoperative diagnosis, staging and postop adjuvant therapy. We have addressed these questions in a review of our experience over a 15-year period. There were 29 patients (17 M, 12 F) with a median age of 65. Most tumors involved the distal two-thirds of the stomach. The gross pathologic description were ulcerating in 14, fungating/polypoid in 1, diffusely infiltrating in 4 (with ulceration in 3) and unclassified in 8. The histologic subtype (Rappaport) included nodular (3 were poorly differentiated lymphocytic) and diffuse (lymphocytic, 3; mixed lymphocytic-histocytic, 1; histiocytic, 18; lympho-

blastic, 3). The extent of disease by TNM stage grouping was Ib,2; Ic,12; II,5; III,4; IV,4 and not evaluable,2. Surgery supplemented by radiation/chemotherapy was the major therapy. Curative resections were done in 13, palliative resections in 10, and 6 patients were not resected. Median survival was 59 months after resection alone in 6 patients (1-168 months). Surgery plus radiation/chemotherapy was associated with a mean survival of 60 months in 6 patients (6-137 months). Overall mean survival was 64 months for the curative group. The median survival was 16 months (3-146 months) after palliative resection and 7 months in the nonresected group. The diagnosis of primary gastric lymphoma preoperatively is difficult and more adequate staging should be performed intraoperatively to select the proper treatment modality in the individual patient.

**Ten Years' Experience with Nissen Fundoplication.** Juan M. Montero, II, MD, *Chesapeake*.

Between April 7, 1974, and April 6, 1984, I performed the Nissen Fundoplication on 159 patients. I assessed clinical results from July 1 to September 30, 1984, through office visits and telephone interviews. One hundred thirty-four (84%) patients responded. This group (I) was followed 5-125 months and averaged 42 months of followup.

Of the 134 responders, 18 (13%) have had previous hiatal hernia operations. As an additional procedure, 20 (15%) had cholecystectomy, 46 (34%) had parietal cell vagotomy and 4 (3%) had both procedures. Twenty-four (18%) had various other procedures performed at the time of fundoplication. Utilizing the Visick grading, I discovered that 73 (55%) patients were very pleased (asymptomatic or excellent) and 58 (43%) patients were satisfied. Three patients (2%) were not satisfied. No one was very displeased. Group II and III patients, who were followed 1-81 months, have had satisfactory to excellent results.

There is, however, a disturbing side effect of this antireflux procedure: Patients who had significant nausea could not vomit, or had a difficult time vomiting. One such patient was admitted as an

emergency with hematemesis secondary to Mallo-ry-Weiss tears of the esophagus.

**Effect of Biliary Obstruction on the Hepatic Excretion of Piperacillin.** K. Brown, MD, R. Strunk, MD, M. Scheld, MD, P. Calhoun, MD, and J. B. Hanks, MD, *Charlottesville*.

Piperacillin (Pip) is a semisynthetic broad spectrum penicillin which has been used increasingly for biliary tract infections. Little is known of its biliary excretion in either the unobstructed or obstructed state. Using the isolated perfused rat liver system, we assessed the biliary excretion of Pip either without obstruction (obs) or with 6 cm H<sub>2</sub>O obstruction to biliary flow in 18-hour fasted rats. We compared bile flow, bile salt output (BSO) and bile Pip levels during infusion of 60µm 14C-taurocholate in an oxygenated perfusate (+10% washed RBCs and 3% albumin) for 30-minute intervals over 90 minutes. All data are mean±SEM.

Bile flow (ml/hr)				
[Pip]	Obs	0-30 min	30-60 min	60-90 min
0	-	.88 ± .03	.86 ± .03	.80 ± .03
50	-	.78 ± .06	.90 ± .08	.79 ± .07
0	+	.47 ± .05*	.44 ± .06*	.41 ± .03*
50	+	.91 ± .11	.80 ± .08	.65 ± .07
Bile [Pip] (µg/ml)				
[Pip]	Obs	0-30 min	30-60 min	60-90 min
50	-	5100 ± 413	5520 ± 371	5835 ± 276
50	+	4412 ± 382*	4338 ± 388*	4062 ± 335*
Bile salt output (µM/hr)				
[Pip]	Obs	0-30 min	30-60 min	60-90 min
0	-	26.4 ± .5	27.2 ± .9	26.7 ± 1.0
50	-	23.9 ± 1.3	26.3 ± 2.3	24.6 ± 2.0
0	+	20.9 ± 2.5*	19.6 ± 2.9*	18.6 ± 2.6*
50	+	24.3 ± 3.0	21.3 ± 1.4	16.1 ± 3.3*

\* p < .05 unpaired t-test, + to - obs

Pip (50µg/ml) did not affect bile flow or BSO in the unobstructed state. Obstruction without Pip resulted in significantly reduced biliary flow and BSO. Interestingly, Pip infusion with obs resulted in increased bile flow to values that approach the unobstructed state. Obs resulted in decreasing BSO over the 90 minutes with or without Pip. Bile Pip concentration was significantly decreased with obs. The clinical use of an antibiotic which may increase biliary flow during partial obstruction deserves further study.

**Long-term Followup of Continent Ileostomy in Ulcerative Colitis.** John M. Kellum, MD, *Richmond*.

Nine patients underwent construction of a continent ileostomy (Kock pouch) by the author following proctocolectomy for ulcerative colitis 2-4 years ago (average 31 months). This group included 3 males and 6 females ranging in age from 18 to 42

years. Eight had conversion from a previous Brooke ileostomy, and one had pouch construction at the time of proctocolectomy. Important technical details included fixation of a 4-cm nipple valve with a combination of sutures, abrasion and staples, and tube decompression of the pouch for 3 weeks. Complete followup was available in all patients. No early complications occurred. Late complications included valve slippage with inability to intubate the pouch, requiring open revision (1), small bowel obstruction resolving with nonsurgical management (1), stomal stenosis revised under local anesthesia (1), and transient episodes of watery diarrhea and pouch inflammation ("pouchitis") resolving with oral metronidazole therapy (4). The patient who underwent open revision 7 months after her original pouch remains continent 2 years later. In this group of patients, intubation of the pouch is required 3-6 times daily (average 4). None of the 9 wears an appliance, and none reports fecal soilage; all express satisfaction with the continent ileostomy. All 8 conversion patients prefer it to the Brooke ileostomy.

**Traumatic Superior Vena Caval Syndrome.** John T. Mazzeo, MD, *McLean*, and Jan J. Dekker, MD, *Alexandria*.

Although superior vena cava syndrome has been well studied, its acute occurrence due to direct trauma has not been reported. In addition, the unusual combination of extravascular compression and intraluminal thrombus formation as diagnosed by serial CT scan will be considered in the case of a 35-year-old female assaulted and garroted with the subsequent development of superior vena cava obstruction will be presented. The normal diagnostic entities of dyspnea, hemoptysis, pleural effusion and facial swelling were not useful because of the associated facial, cervical and thoracic injuries. Therefore diagnosis was difficult, but a high index of suspicion, serial chest x-rays and the use of CT scan enabled an early diagnosis. The use of anticoagulation therapy as the primary method of treatment will be discussed.

**Development of a Basic Surgical Skills Curriculum.** Martin H. Max, MD, Ruth Atwood, MEd, Robert Brickman, MD, Roger Gregory, MD, Delores Whitfield, ResTch, and James F. Lind, MD, *Norfolk*.

Basic surgical skills are usually learned by the surgical resident in the operating room where they may be taught by a variety of attendings and residents without a uniform approach. A course in basic surgical skills is given in the first 3 months of

the PGY 1 year to introduce the residents to the principles of surgical techniques. Six 3-hour sessions are scheduled. These include the use of surgical instruments and techniques of hemostasis, wound closure, gastrointestinal suturing and vascular suturing as well as the operating room environment. Written objectives are provided for the didactic sessions. The lectures and technical demonstrations are followed by hands on, small group, faculty supervised sessions utilizing animal models. It is the impression of the faculty that the PGY 1 residents are more confident in the operating room and are more facile with the use of surgical instruments. Providing surgical house officers with a structured exposure to certain basic surgical techniques may have significant long-term benefits in the development of technical skills and is an important component of core education for surgical residents.

**Indications for Emergency Intravenous Pyelography (IVP).** Worthington G. Schenk, III, MD, *Charlotteville*.

Renal imaging in the diagnostic evaluation of abdominal trauma is a valuable adjunct, but its indications remain controversial. Classic indications for the use of emergency IVP have been very liberal, but more recently the medical need, cost effectiveness and potential risks of this approach have been questioned in favor of a more selective approach. This retrospective study was undertaken to reassess the value of emergency IVP in abdominal trauma and to test the hypothesis that posttraumatic microscopic hematuria, without other physical or laboratory findings, can safely be managed by observation alone. With the aid of the computerized Trauma Registry at the University of Virginia Medical Center, 51 patients undergoing emergency IVP for abdominal trauma were identified over a 1-year period. A significantly abnormal IVP was found in 6 out of 7 patients with gross hematuria (86%). None of 44 patients with microscopic hematuria had a clinically significant abnormality ( $p < .001$ , Chi Square test). Three patients in the latter group (7%) had IVP findings which were anatomically abnormal but clinically insignificant, while an equal number (7%) had IVPs which were inadequate or misleading. Emergency IVP is useful in patients with specific indications and gross hematuria, but patients with posttraumatic microscopic hematuria alone may be safely followed by observation. Abdominal CT scanning is emerging as a more useful study than IVP for renal imaging in the stable patient with blunt abdominal trauma.

**Is Trauma Manageable?** Joseph T. Mullen, MD, and Kent J. Weber, MS, *Norfolk*.

Although trauma is listed as the third most common cause of death in the United States, it is the leading cause of death between the ages of 1-35. In 1983 there were 65 million injuries and 165,000 deaths due to trauma in the United States. In Virginia there were 63,184 injuries and 900 deaths due to traffic accidents alone. Its cost must include lost productivity and wages, hospital and rehabilitation costs, property costs and death costs and when so measured, exceed the cost for both heart disease and cancer—in 1983, in excess of \$82 billion in the United States and \$810 million in Virginia. The means of trying to make this often neglected disease, which has reached pandemic proportions, more manageable include the development of emergency medical services systems, trauma teams and trauma centers. Public awareness and physician interest in this serious public health and socioeconomic problem can change apathy to action and make trauma a more manageable disease.

**Conservative Management of Copperhead Snake Bites.** Richard H. Gettys, MD, Timothy V. Chavis, MD, Carol M. Gilbert, MD, Robert E. Berry, MD, *Roanoke*.

The copperhead snake is an outdoor hazard common in Southwest Virginia. Five recent cases of copperhead snakebite occurring in our area emphasize the importance of understanding these injuries. The 5 cases, as well as the current literature, were reviewed. We concluded that copperhead snakebites of minimal to moderate envenomization can be treated conservatively. Even with low levels of envenomization, mild long-term sequelae occur. Patients should be observed beyond the time of immediate injury.

**Primary Breast Reconstruction with Tissue Expansion.** George Knaysi, MD, Peter Brown, MD, and I. Kelman Cohen, MD, *Richmond*.

Gradual expansion of skin and soft tissues with a silicone expander permits simple, effective, immediate reconstruction of the breast at the time of modified radical mastectomy if pectoralis major and serratus anterior muscles are preserved. The expander must be covered totally by muscle to create a breast with near-normal shape and texture. Expansion can be initiated immediately or delayed for a few weeks if there is any question of flap viability. After adequate expansion, the expander is replaced with a silicone breast implant, usually as an outpatient procedure. Outpatient nipple areolar recon-

struction is usually done a few months later, when breast contour has stabilized. This procedure offers a simple, safe method to create a reconstructed breast of comparable shape and texture to the opposite breast.

Between October 1983 and December 1984, we performed 19 primary breast reconstructions with tissue expansion. There have been 4 expander deflations and 2 infections.

Patients who will undergo this procedure must be carefully informed of several factors: 1) The usual risks and complications of an expansive device. 2) At the peak of expansion, the reconstructed breast will present aesthetic problems, even in clothes. 3) The rate of expansion is extremely variable from patient to patient and is difficult to predict. 4) Some patients experience modest to moderate discomfort when expanded. 5) Caution the patients about the filling valve as they may think it is a tumor!

#### **Comparison of Different Methods of Breast Reconstruction.** James H. Carraway, MD, *Norfolk*.

With the emergence of modified radical mastectomy as treatment for breast cancer, breast reconstruction has been most satisfactory and a variety of methods have been used. Initially, subpectoral insertion of a silicone-type implant created a breast mound which, in most cases, retained its softness and good shape along with its natural breast form. Nipple reconstruction was then performed using local and distant tissue for grafting. There were, however, cases which were not good candidates for this type of reconstruction because of a shortage of tissue. Because of that, the latissimus dorsi myocutaneous flap was refined as a method for bringing skin and muscle from the back area to the chest wall to be used in conjunction with a breast implant. This created a natural breast mound and was responsible for some excellent results. This technique consisted of taking an ellipse of skin, fat and rectus abdominus muscle and moving it up to the breast area via a subcutaneous tunnel. It was often possible to rebuild the breast without using an implant. There have been some complications with this technique, although it is still commonly used. Recently, skin expanders which can be put in place and injected percutaneously have been used to stretch and expand the tissue and space which subsequently can be the recipient area of a silicone implant for breast reconstruction. This is a relatively simple procedure and has been responsible for some good results in breast reconstruction. The indications for use and some of the results of this technique will be shown.

# LETTERS

## **He knows exactly where Kinloch is**

I can tell you "Where's Kinloch:"<sup>1</sup> He is very much a part of all his former students who learned "There is not a patient that you can't do something to help."

That's where Kinloch is.

**John W. Painter, MD**

1300 Thornton Street  
Fredericksburg VA 22401

1. Thompson WTjr: Where's Kinloch? *Va Med* 1985;112:120-122

**Editors' Note:** Dr. Painter was at the Medical College of Virginia (Class of 1950) when Dr. Kinloch Nelson was its dean. Dr. Thompson's editorial was occasioned by Dr. Nelson's retirement.

## **"Virginia physicians made it happen"**

We appreciate the continued participation of Medical Society of Virginia members in the Medicaid program and their continued cooperation to keep Medicaid costs down. Much has been accomplished in the last two years, but only because Virginia physicians made it happen.

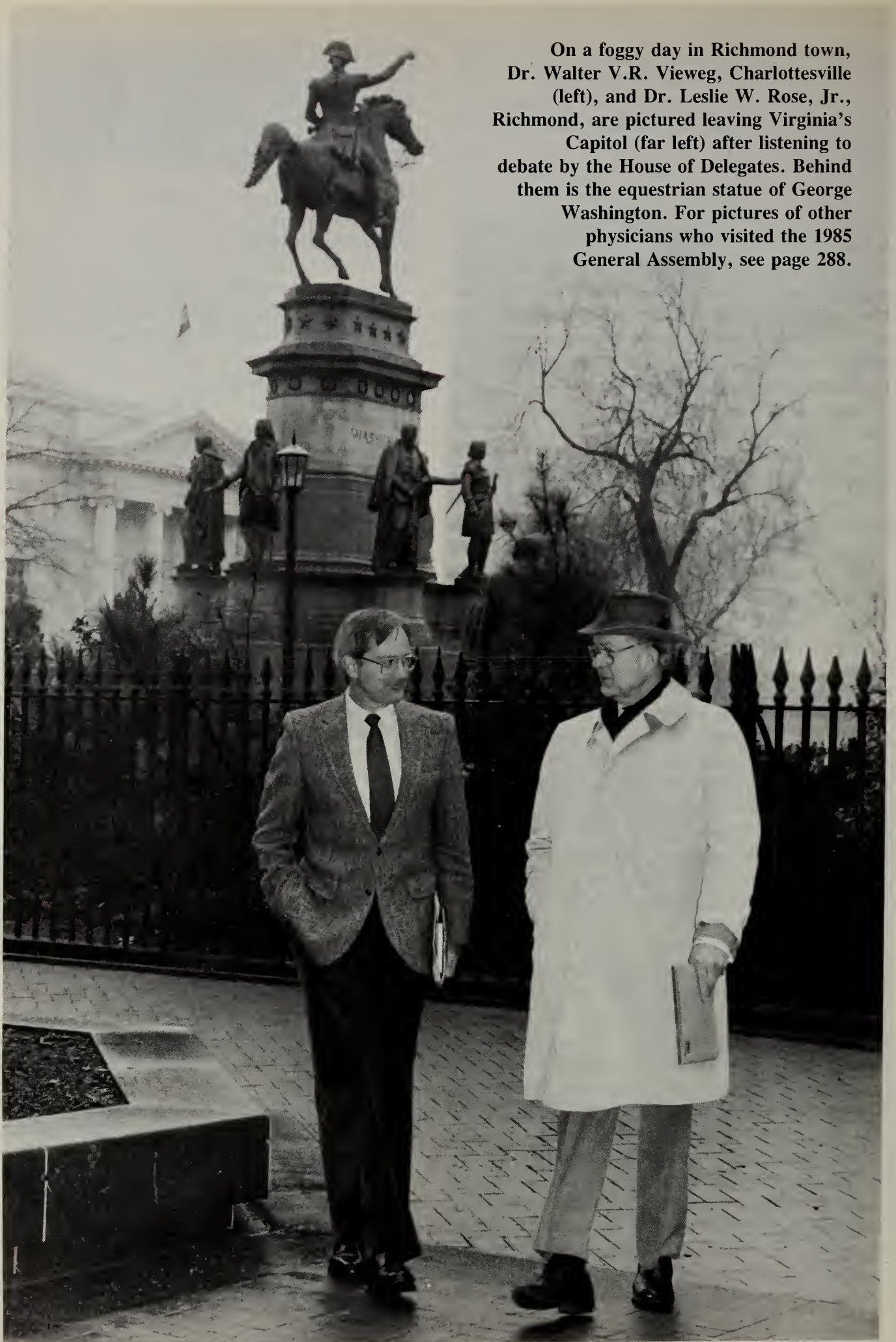
Medicaid expenditures for drugs increased by \$6,000,000 between fiscal years 1983 and 1984. We did a comprehensive analysis of the 15 most utilized therapeutic classifications. After allowing for manufacturer's cost increases, we discovered that during 1984, 49% of the 100 most utilized drugs in the 15 most utilized therapeutic classifications were single-source, brand-name drugs, and there was an 18.2% increase in the prescribing of these more expensive drugs.

We ask that the more expensive brand-name drugs be prescribed only when medically necessary. The prescribing of generic equivalent drugs when available will result in substantial savings to the Medicaid program.

**C. Mack Brankley**

Director, Operations/Provider Services  
Office of Medical Assistance, Department of Health  
109 Governor Street, Richmond VA 23219

On a foggy day in Richmond town,  
Dr. Walter V.R. Vieweg, Charlottesville  
(left), and Dr. Leslie W. Rose, Jr.,  
Richmond, are pictured leaving Virginia's  
Capitol (far left) after listening to  
debate by the House of Delegates. Behind  
them is the equestrian statue of George  
Washington. For pictures of other  
physicians who visited the 1985  
General Assembly, see page 288.



# VIRGINIA MEDICAL EDITORIAL

## Long View of a Short Session

**T**HE GENERAL ASSEMBLY went home on February 23, 1985, after completing its biannual short session. It reconvened on April 3, 1985, to review bills that were vetoed by the governor and to elect a member of the State Corporation Commission and to consider appointing several judges.

Fortunately, adverse medical legislation did not make headlines in this session, as revealed by the Legislative Update mailed to the entire Medical Society of Virginia membership. Contributing significantly to this outcome were the physicians who visited the General Assembly to make their views known to the legislators. [Editors' Note: See the picture opposite, more pictures on page 288, and the list of physicians on the next page.]

Several professional liability bills were introduced, but action was deferred until the current joint legislative subcommittee that is studying the malpractice issue completes its work.<sup>1</sup> The subcommittee's activity was extended by HJR 209 for one year. The Medical Society of Virginia is represented on this subcommittee by Dr. George M. Nipe, former MSV President and currently an alternate delegate to the American Medical Association. This

Dr. Wootton is a past president of The Medical Society of Virginia and is currently chairman of the MSV Legislative and Vanguard Committees.

subcommittee will hold additional public hearings this summer and fall, and I feel that as many members as possible should attend.

The cost of professional liability insurance has become a national crisis, as this journal pointed out only last month in a section of articles on malpractice.<sup>2-4</sup> The American Medical Assurance Company recently reported to the AMA's Board of Trustees that annual premium increases will exceed 20%-30% and will affect all carriers, including both captive and commercial companies. I believe a lasting solution to this problem will best be made by individual states. I hope that our General Assembly will give it top priority in 1986.

Discussions between the representatives of The Medical Society of Virginia, the State Board of Medicine, and podiatrists will take place this year. Under consideration will be a proposed change in the definition of podiatry in the Virginia Code. The welfare and health of the citizens of the Commonwealth should be guarded by those participating in these discussions.

The State Department of Health will be studying several aspects of the certificate of need law and will be reporting to the 1986 General Assembly. It is mandatory that The Medical Society of Virginia have additional opportunity to give testimony to the department.

The 1986 General Assembly will receive a report from the Joint House/Senate Committee that will study preferred provider organizations (PPOs) and health maintenance organizations (HMOs). This study will provide Medical Society of Virginia leadership an excellent opportunity to offer educational testimony. It is my opinion that additional legislation is needed to regulate the activities of these health care providers.

A mandatory seat belt bill introduced by Del. J. Samuel Glasscock and supported by The Medical Society of Virginia was passed by the House but defeated by the Senate. As this report was being written, two Democrat candidates for Virginia's governorship, Lt. Gov. Richard J. Davis and Attorney General Gerald Baliles, had gone on record as favoring such legislation. Perhaps the bill will be reintroduced at the next session.

Members of The Medical Society of Virginia have been very concerned about the disciplinary functions of the State Board of Medicine. The Virginia Code Commission is currently studying this problem. As requested by the Board's president, Dr. Edwin L. Kendig, Jr., the General Assembly appropriated funds to provide additional staff and amended the summary suspension rule, as described by Dr. Kendig in his editorial following.

The dates of the hearings of the commissions and committees of the General Assembly will be published in VIRGINIA MEDICAL as soon as they become known. I feel that it is important that as many MSV members as possible should be in attendance at these public hearings.

The Physician Visitation Program was successful during this General Assembly but there is always

room for improvement. It is planned that there will be a legislative conference for physicians in 1986 on the Saturday following the introduction of all bills in that session. This conference would first educate physician participants as to the major issues being considered and would feature several legislators presenting talks on the implications of certain pieces of legislation that had been introduced. Following this conference and discussions, prearranged appointments would then be made for physicians to meet with their own local representatives. Hopefully, the leadership of The Medical Society of Virginia will be in attendance as well as the presidents of the local component societies.

The most effective lobbyist is one that has participated in the election of the members of the General Assembly. This coming November the 100 members of Virginia's House of Delegates will stand for election. Early participation and support for your elective representatives will give you added recognition in the 1986 General Assembly when you come to visit. I urge you to become an activist now!!

PERCY WOOTTON, MD

7601 Forest Avenue  
Richmond VA 23229

1. AG: Malpractice a magnet for legislators. Va Med 1984;111:590-591
2. Davis RK: Searching for a new system. Va Med 1985;112:234-237
3. O'Connell J: The "neo no-fault" alternative. Va Med 1985;112:239-243
4. Abstracts of the National Medical Malpractice Conference. Va Med 1985;112:238,242-243

## Success?

**A**T first glance it would appear that "successful" is the adjective that describes the results accompanying the efforts of the State Board of Medicine at the recent session of the General Assembly of Virginia. With the technical assistance of the Attorney General's office, a change in the Code, substituting "substantial" for "imminent" before the phrase "danger to the public," will allow for easier utilization of the summary suspension rule. Funds provided by the increase in physician licensure fees will allow for the addition of two clerks-typists (or similar personnel) in the State Board of Medicine office, two additional trained investiga-

tors to be assigned to the Board of Medicine, and two additional assistant attorneys general to be assigned to the Board of Medicine.

The summary suspension rule change is indeed an accomplishment. The other approved changes may be. The director of the Department of Health Regulatory Boards is studying the manner in which personnel may (or should) be added to the Board of Medicine office. There appears to be no guarantee that additional investigators will be added; or, if they are, whether or not they will be assigned to the Board.

Finally, the Attorney General's office deferred

until July 1 any decision in regard to a more liberal assignment of assistant attorney general time to the State Board of Medicine while the effects of administrative change are being studied.

Much time and effort have been expended. Was the venture really a success?

EDWIN L. KENDIG, JR., MD

## Salute to a Life of Excellence

ON January 12, 1985, I was privileged to attend, in Norfolk, a reception marking the establishment of the John Franklin Medical Foundation. A plaque in the Norfolk Diagnostic Clinic commemorating the occasion reads as follows:

*The John Franklin Medical Foundation, dedicated 12 January 1985 to promote and support medical research, education and patient care. Named in honor of Dr. John Franklin, Master Physician, who has made an extraordinary contribution to medicine in the Tidewater area for over forty years. Dr. Franklin has devoted his professional life to excellence in the practice of medicine and his personal life to the care and well-being of his patients, his family, his colleagues and his community. He is held in the highest esteem both as a man and as a physician by all who have been privileged to know him.*

This text summarizes a medical practice begun in 1947 when Jack came from Johns Hopkins to Nor-



Dr. John Franklin greets well-wishers at the reception in his honor. Photo by Willy Monroe.

folk to be associated with the late Dr. Walter Martin, with offices in the old Wainwright Building. Later, as more associates were added and Dr. Martin retired, the office moved to the Norfolk Medical Tower, where for many years it was officially known as Internal Medical Associates, but to many patients it was "the Franklin clinic." In 1977 Jack joined with eleven colleagues to form the Norfolk Diagnostic Clinic on Kempsville Road in the development of which he has played a prominent role. With this background, the John Franklin Medical Foundation took root.

But what of the man it honors? I have known Jack Franklin since we matriculated in medical school in 1937. Classes were small and closely knit then, and our paths have crossed frequently over the years. His life has been a record of consistency, dedication and purpose from the days he was valedictorian of his high school class, through his undergraduate and medical school years at Yale, his advanced training at Johns Hopkins Hospital—interrupted during World War II by service in the Army Medical Corps—and since 1947 in Norfolk. He shortly thereafter became widely known and recognized in the Tidewater area as a highly competent consultant in internal medicine and cardiology and promptly acquired an extremely large and devoted medical practice. Despite the demands of his practice, he has found time to become involved in a vast number of professional, civic and church activities. For several decades he attended the wards and clinics of Norfolk General and DePaul hospitals, where he was a dominant member of the teaching staffs. He has served as chief of medicine at both hospitals. His teaching rounds at the Navy and United States Public Health Service hospitals will be long remembered by those who attended them.

Jack was an early advocate of the plan to establish a medical school in Norfolk. He served for five years in the initial planning council and subsequently for seven years as a commissioner of the Norfolk Area Medical Center Authority. Additionally, he has served on numerous advisory and search com-

mittees for the medical school and currently serves as associate professor of internal medicine.

He has found time for his church, having served as vestryman and as junior and senior warden at the Church of the Good Shepherd. He has held a number of leadership roles in the community. He is a past president of the Norfolk Academy of Medicine. He has been chairman of the Professional Division of the United Fund, has served on the mayor's Youth Commission, and was chairman of the Health, Welfare and Planning Council at the inception of the Tidewater Rehabilitation Institute.

Finally, in 1943 he had the good sense and good fortune to acquire his outstanding wife Frannie, without whose unfailing encouragement and support he might still be languishing in a downtown office building. Their three children and grandchildren are a great pride and joy.

But Jack Franklin's greatest attribute is his concern for his fellow man. He is as interested and concerned for the health and welfare of an elderly lady in marginal circumstances as he is in the affluent business executive. The patient who appears at 5:30 PM on Friday has always received exactly the same courtesy and attention as the 10 AM patient on Monday. This remarkable sense of responsibility, caring and concern has always included his family, his colleagues and his community.

A few weeks after the dedication ceremony, Jack underwent a quadruple coronary artery bypass. While he came through the procedure with flying colors, he tells me that the enforced rest period postoperatively was so pleasant that he decided to retire from the practice of medicine on May 1. His presence on the medical scene will be sorely missed, but we wish him and Frannie much happiness, contentment and many more productive years among their children, grandchildren and host of friends.

WILLYS M. MONROE, MD

5303 Ditchley Road  
Richmond VA 23226

# OBITUARY

## T. E. Donnelly, Sr., MD

Dr. Thomas Edward Donnelly, Sr., former president of the Southwestern Virginia Medical Society, died at his home in Roanoke on February 2 at the age of 54. He had practiced as an internist in Roanoke since 1962.

A graduate of Emory and Henry College, Dr. Donnelly earned his medical degree at the Medical College of Virginia in 1958, then trained at MCV and at Roanoke Memorial Hospital, where he was later chief of medicine. In addition to his private practice, he had been for two years prior to his death medical director of the Shenandoah Life Insurance Company.

Dr. Donnelly belonged also to the Roanoke Academy of Medicine, the Virginia Society of Internal Medicine, and the American Diabetes Association.

## Memoir of E. W. Hickson 1900-1985

*By Richard F. Hawkins, MD, and  
Stephen L. Thompson, MD*

Dr. Edward Watts Hickman, a loved and respected physician of Rustburg, Virginia, died of acute myocardial infarction on January 16, 1985, at age 84.

Dr. Hickson was born at "Carywood" plantation near Evington, Virginia, on March 9, 1900, and was the son of William and Elizabeth Saunders Hickson. His early education was in Virginia and then for a short time in Florida before his father died. He returned to Virginia and graduated from VPI, and his entire cadet corps was inducted into the army during World War I.

Following a tour of military duty, he attended school at the University of Missouri and then entered medical school there while living with an uncle, a pediatrician in St. Louis. Graduating with his MD degree in 1926, he completed postgraduate medical training at St. Louis City Hospital.

Dr. Hickson entered medical practice in Milan,

Missouri. There he met his bride, Mildred Moorehouse, and they were married in 1930. Later, they were blessed with two children. Dr. Hickson practiced in Milan for 13 years before moving to Fairmont, West Virginia, where he continued practice for an equal time period. In 1954, the family returned to his native Virginia and settled in Rustburg. There his practice continued until he retired in April 1980, having completed 54 years of medical practice.

Dr. Hickson's medical contributions to the Rustburg community and to Campbell County are beyond description. His devotion to the practice of medicine and the endless number of early morning house calls when he was the only physician will never be forgotten. His years of service as one of the county's few medical examiners were invaluable to the community and state. His retirement, although well deserved, was a blow to his loyal and loving patients.

He was generous not only with his time and medical talents, but was a pillar in the Rustburg United Methodist Church—a long-time trustee and faithful attendant.

He was an expert gardener, and his other hobbies included hunting, fishing and, not the least of these, travel. This included eight trips to Europe, four to the Mediterranean, and trips to Australia, Africa and Alaska.

Perhaps his life is best summarized by the note of a church member and patient who said, "Doc, we love you, we miss you, and we will remember."

His professional memberships included the Lynchburg Academy of Medicine, The Medical Society of Virginia and the AMA. Some of his civic and fraternal affairs included memberships in Mackey Mason Lodge for 50 years, Rustburg Ruritan Club, and Patrick Henry Society of the Sons of the American Revolution.

He is survived by his beloved wife of 54 years; a son, James Singleton; a daughter, Mildred Ann Guthrie; and two grandchildren, Brenda and Ellen.

## **William S. Lloyd, MD**

Dr. William Samuel Lloyd, 74, died February 18 at his home in Richmond. He had retired in 1982 after almost 50 years as a general practitioner in Goochland and Powhatan Counties.

Dr. Lloyd was a native of Louisa County and a graduate of the University of Richmond and the Medical College of Virginia. He had been physician for the Beaumont Learning Center and the Virginia Correctional Centers for Women and for Men, and had also served as medical examiner for Goochland. Long a member of The Medical Society of Virginia, Dr. Lloyd also belonged to the Richmond Academy of Medicine, the James River Medical Society, and the American Academy of Family Physicians.

## **Charles P. M. Sheffey, MD**

Dr. Charles Phillips Mahood Sheffey, Lynchburg, died March 8 after a long illness. He was 92 years old and had retired in 1969.

A native of Lynchburg, Dr. Sheffey was graduated from Randolph-Macon College and Johns Hopkins University School of Medicine, then trained in surgery in New York City and in tropical medicine in Brussels, Belgium. He served two tours of duty, totalling almost 20 years, as a medical missionary in Africa under the Board of Missions of what was then the Methodist Episcopal Church, South, returning to Lynchburg to practice for two years in the late twenties and from 1945 until his retirement.

Randolph-Macon gave Dr. Sheffey an honorary LLD degree in 1956, and in the same year he was the recipient of the Good Samaritan Award of the Lynchburg Civitan Club.

Long a member of The Medical Society of Virginia, Dr. Sheffey also belonged to the Lynchburg Academy of Medicine and the American Medical Association.

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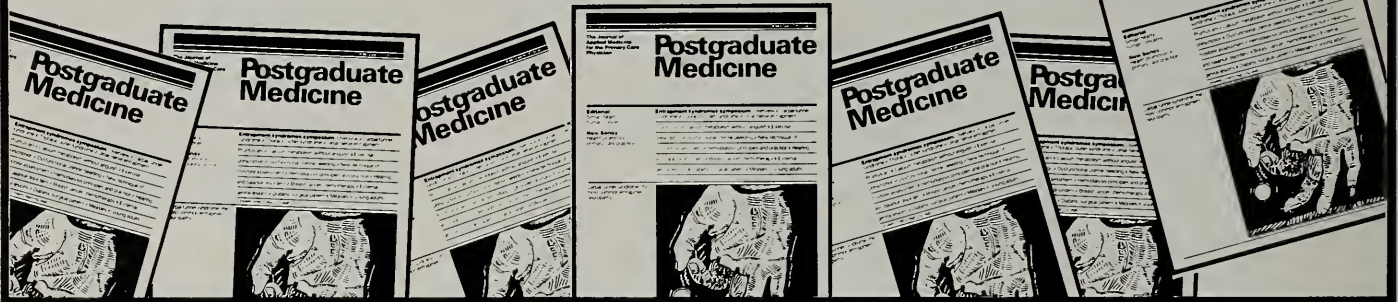
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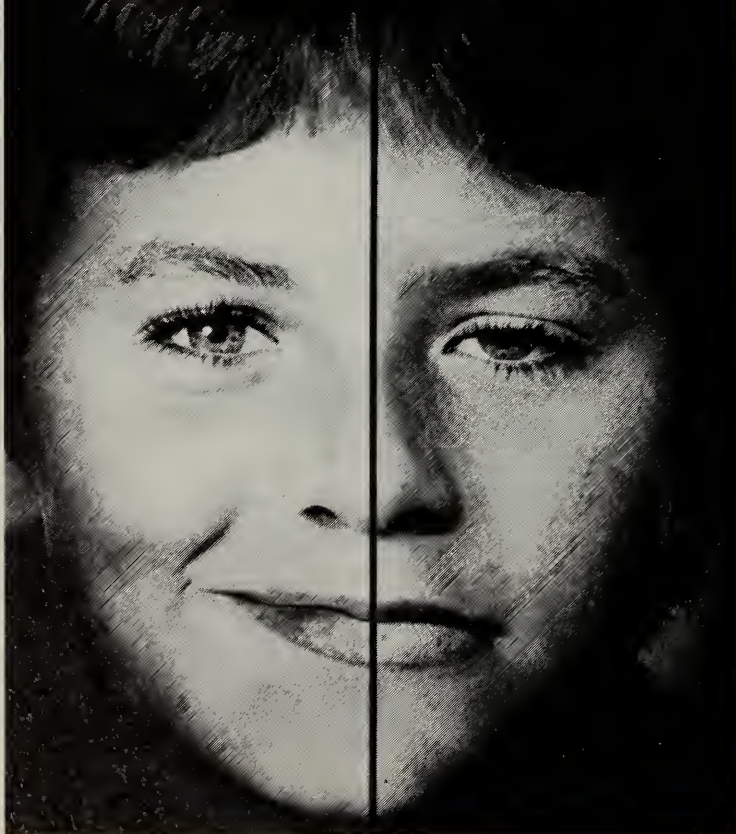


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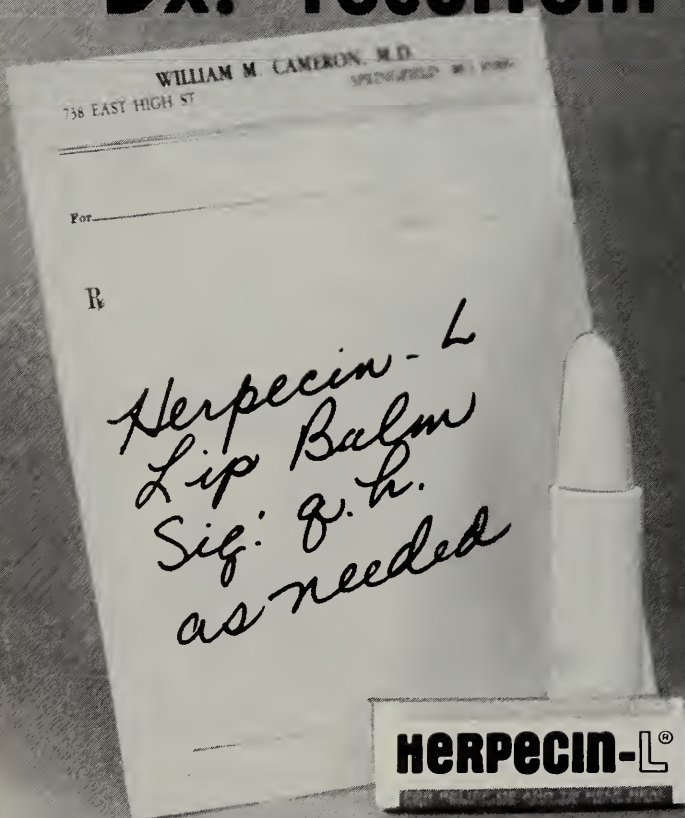
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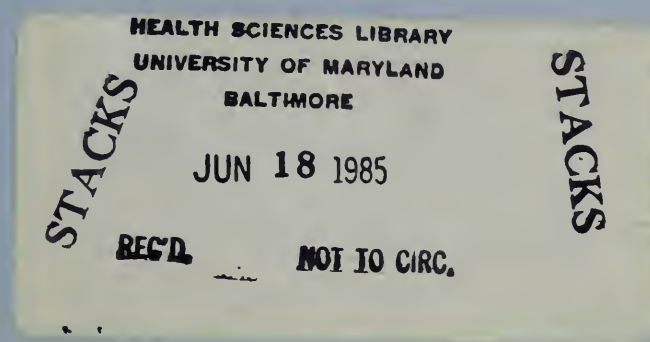
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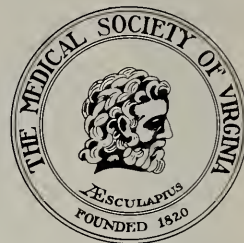
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# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

Departing from the traditional one-day format, The Medical Society of Virginia's Council undertook an extended two-day meeting on May 4 and 5 in Richmond. The guest list was extended, too, to include component society presidents, committee chairmen and specialty society representatives; 77 Virginia physicians were there, plus several allied professionals. MSV President Harry C. Kuykendall kept the long agenda on track and on time. Herewith some of the action; detailed minutes may be had by writing to Executive Vice President James L. Moore, Jr.

### INFO CAMPAIGN SET ON UNIFIED MEMBERSHIP

Returning to the subject of unified MSV-AMA membership, which had been broached at their February meeting and referred then to the Membership Committee, the councilors heard chairman J. Thomas Hulvey relay the committee's endorsement of unification and then moved briskly to place the matter before the House of Delegates at its meeting in November. Considerations of procedure led to lengthy discussion. Should the Council or the Bylaws Committee send a recommendation? Should the vote occur in the House or be offered to the membership? If the latter, what would be the proxy policy? Councilor H. Alan Bigley, Jr., brought these questions to a halt by moving that the Council "encourage careful dissemination of information on unified membership to all MSV members, before sending the matter to the House." His motion passed without the doubtful voices heard at the February meeting. Vice Councilor John W. Hollowell arose to identify himself as one of those who hadn't been in favor of the proposal in February; in the interim, he related, he had asked ten MSV members who are not members of the AMA what they thought of unified membership, and to his surprise, all ten had said they support unification and would join the AMA if it became part of the MSV membership package. Two of them asked that billings be semiannual, to cushion the higher tab, but that was the only caveat he encountered, Dr. Hollowell said, and he declared himself a convert to unified membership.

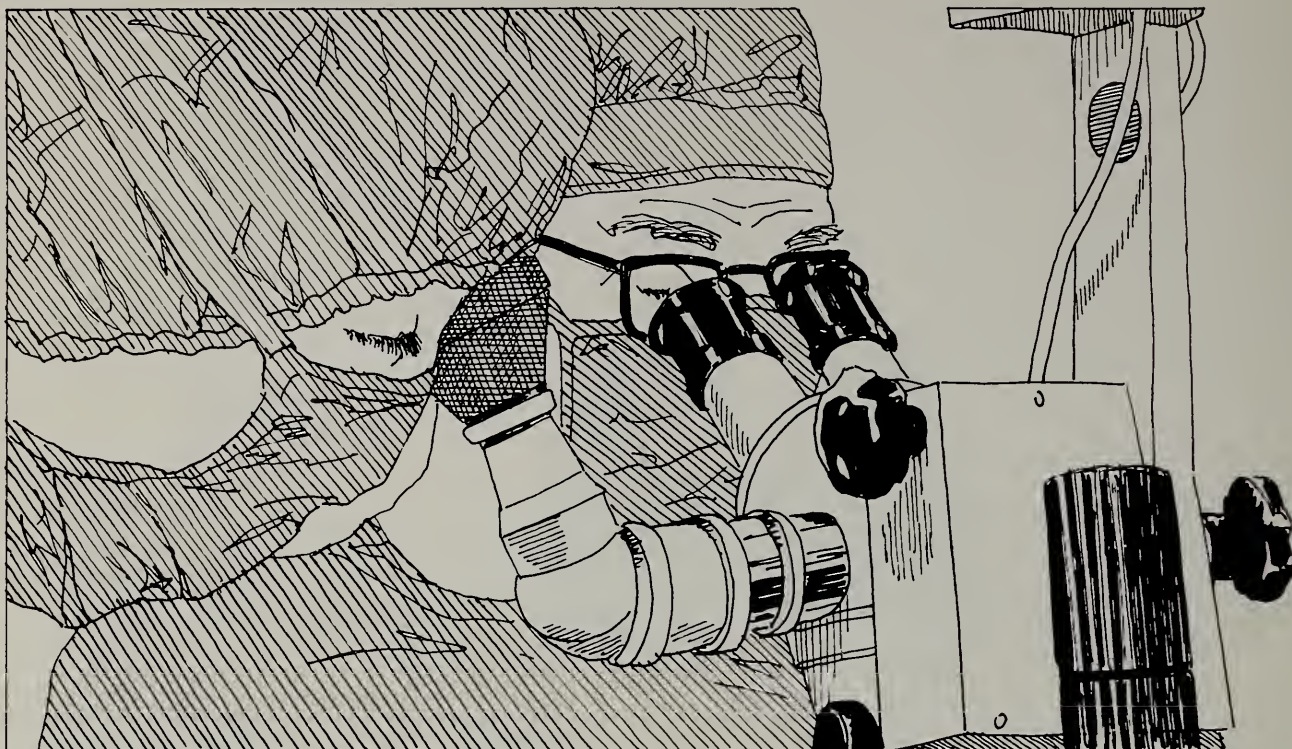
What would the unified membership dues tab be? The Medical Society of Virginia's dues are now \$195 per year for active members, the American Medical Association's \$330 less 10% to unified members = \$297. Total tab to active unified member as of May 1985: \$492.

How many Medical Society of Virginia members would be affected by unification? As the Council met, there were 5,367 active members paying full dues to The Medical Society of Virginia; Of that number, 2,695 showed AMA membership also. A group of 712 MSV members are dues-exempt, by virtue of age or office; all of them belong to the AMA. Are there any Virginia physicians who belong to the AMA but not to The Medical Society of Virginia? Yes. The AMA's membership department thinks there are 443 of them paying full (active) or discounted (military, first- or second-year practice) dues; since unified membership works both ways, they would have to join the Medical Society

CONTINUED ON PAGE 354

President Harry C. Kuykendall  
presiding at the two-day  
meeting of Council.  
At his left are Jim Moore  
and Mary Candler of the staff.





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\*JAMA, Volume 248, No. 3, pages 336-339  
Yearbook of Medicine, 1983, pages 66-67

of Virginia in order to continue on the AMA roster.

How would unified membership affect Virginia's component medical societies? A few of them have unified local-state membership, i.e., the component society's members are required to belong also to The Medical Society of Virginia; under unified MSV-AMA membership, mandatory membership in the national organization would seem to attach to such a requirement.

## IN VIRGINIA, LIABILITY RATES NOT SO YEASTY

"For the first time in four years I can report to you with joy and enthusiasm," said Dr. Alvin E. Conner, chairman of the Insurance Committee, as he brought to the Council news of St. Paul's 1985 liability rate increase. Nationwide, the increase will average 35%, Dr. Conner reported, but in Virginia the increase will reach only into the middle to upper teens; the exact figure won't be known until the rates are filed. He was talking about the statewide average, Dr. Conner emphasized; some doctors' premiums may go up 25%, some may decrease 5%, depending on demographics and specialty. Why was Virginia's experience this year relatively benign? "I don't know," the chairman admitted. "Maybe it's our legislative curbs--the cap, the statute of limitations." He suggested that MSV members work hard to keep those safeguards in place, and he urged a continuation of the risk management seminar program.

Dr. Conner noted that in the insurance field, competition, which is popularly considered a cure-all, has fragmented the market ("St. Paul used to insure 90% of the doctors in Virginia; its share now is 50%") and fostered a selectivity that hurts physicians. "Every company wants the good risks, nobody wants the terrible risks, the 'in between' risks will be caught in a bad situation."

From Dr. P. Declan Burke, Culpeper ob-gyn sitting in the specialty society section, came this question: What happens to liability coverage if you abandon the practice of obstetrics but continue in gynecology? St. Paul has the mechanism in place to handle that, Dr. Conner responded. "You will be charged a tail on the ob practice, the premium will be adjusted to cover gynecology only, and off you go."

## TRADE-OFF MIGHT MITIGATE 20-YEAR LIABILITY HAZARD

More on malpractice came from Dr. Ronald K. Davis, chairman of the Society's Committee to Study Malpractice, which helped foster the 1985 General Assembly's moderate stance on liability legislation. The committee has been concerned about the 20-year exposure to suit to which obstetricians, pediatricians and others who treat infants are subjected, Dr. Davis related. How might that exposure be mitigated, the committee has been asking legislators, and Del. Clifton A. Woodrum, the subcommittee's chairman, had come up with an idea. Legal counsel Allen Goolsby explained:

Woodrum suggests changing the statute of limitations, which is now at two years from date of injury, and then placing all physicians under its jurisdiction. The four options for change: 1) Two years from date the injury "should have been discovered," i.e., the circumstances were such that the doctor should have known things were not normal, with a cap at ten years from occurrence. 2) Same limitation but with a five-year cap. 3) One year from the date the injury should have been discovered,

with a ten-year cap. 4) One year with a five-year cap. "It's an interesting trade-off," the lawyer commented.

From the floor came a question. "Does anyone know what that would do to malpractice rates generally?" No, Dr. Davis said, and an answer researched by an actuary was estimated at \$5,000-\$10,000. "Awfully expensive," ventured one councilor, to which Councilor Glenn B. Updike, Jr., retorted, "That's cheap for an actuary," and he moved that Council authorize up to \$10,000 for such a study. The motion passed unanimously.

## MONEY: MAKING IT, LENDING IT

The Medical Society of Virginia now has two separate and distinct financial instruments: a non-stock, non-profit Foundation and a Services Corporation established to raise non-dues dollars. In place for less than a year, the Corporation is already registering revenues derived from the ICC Systems collections agency, sales of the Society's membership list for mailing purposes, and fees from the AMA for collecting dues. Now, the councilors heard from Dr. George M. Nipe, the Long-Range Planning Committee is looking into insurance as a money-making device. Might the Society become an insurer, or an insurance broker? The committee has initiated a feasibility study on the subject and Dr. Nipe promised estimates at the next Council meeting.

The Foundation has been the focus of the Scholarship Committee, as it looked into the possibility of a medical student loan fund under MSV sponsorship. In the absence of chairman Anthony J. Munoz, Dr. William D. Mayer took the microphone to report that the study was complete and a loan fund proposed as follows: Loans would be offered at reasonable interest rates to residents of Virginia enrolled in Virginia's medical schools. Loans would be made to those who have completed one year in medical school; student attrition is highest in the first year. The loan limit would be \$2,000 per year. Suggested interest at the outset would be 4% during school years, 8% during residency and 12% thereafter. The fund would be established by assessing each MSV member \$20. It would be administered by a Loan Committee of MSV members.

There was instant support for the fund. Observed Dr. William S. Hotchkiss, "When you have a loan fund, as against giving scholarships, you have a revolving fund that increases over the years. Illinois now has over \$1 million to loan out to students." But don't abandon the Society's scholarship program, Dr. Updike urged, and Dr. Bigley echoed his plea. Continue the scholarships, directed the the councilors, and set up the loan fund as outlined.

Anticipating the loan fund, the Membership Committee had researched membership credit cards as a means of creating revenue for it. Central Fidelity Bank of Virginia had submitted the most favorable credit card plan, chairman Hulvey reported, and had estimated a yield of \$6,000-\$7,000 the first year (one-fourth of 1% of charges) and \$10,000-\$12,000 the second year (one-half of 1% of charges). All revenues would be earmarked for the student loan fund. The card would carry a credit limit of \$3,000 or higher. The first-year fee would be waived, and the bank guaranteed a rate of \$15 per year for the three

CONTINUED ON PAGE 359

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succeeding years. Why, asked one councilor, add another credit card to his wallet? To support the student loan fund, said Dr. Hulvey. Council approved the plan.

## MONEY: GIVING IT

Virginia's three medical schools will reap another fine AMA-ERF harvest this year, reported Mrs. Garland Bigley, president, the Medical Society of Virginia Auxiliary. The total being allotted is \$47,249.71, all of it raised by Auxiliary members in a variety of money-making projects.

Through the efforts of the Student Medical Society at the Medical College of Virginia, the hefty sum of \$35,000 will go to the African famine relief program. Dr. Leon J. Dunn brought the councilors this news on behalf of Jean Marangu, the students' president. Under her leadership the students set out to raise \$500 with a raffle, Dr. Dunn related, but found so much support for the cause that they wound up sponsoring not only the raffle but a concert with four bands and several other fund-raising mechanisms. Members of the Richmond Academy of Medicine and MSV officers responded generously to a letter of appeal. The American Red Cross will distribute the money.

## TWO IMPAIRMENT EFFORTS NOW IN TUNE

The chairman of the Physicians Health/Effectiveness Committee, Dr. William H. Barney, brought the councilors the good news that success had crowned efforts to bring into harmony the committee's program on behalf of impaired physicians and the State Board of Medicine's reporting system. In the past some glitches in communications had led to awkward situations for physicians who have entered treatment. Now there is agreement that the committee does not have to report cases to the Board. Accordingly, in cases of alcohol abuse the Society's intervenors will report impairment to the Board only if 1) the physician does not accept treatment or 2) the physician falls out of the treatment program and cannot be brought back in. The Board agreed to check with the Society's program on receipt of a report of an impaired physician and to withhold action if that physician is in treatment. In cases of drug abuse, the committee will report impairment to the Board but with the information that the physician is proceeding with a rehabilitation program and the request that the Board refrain from action as long as that is the case. "The two staffs are now working very well together," Dr. Barney said.

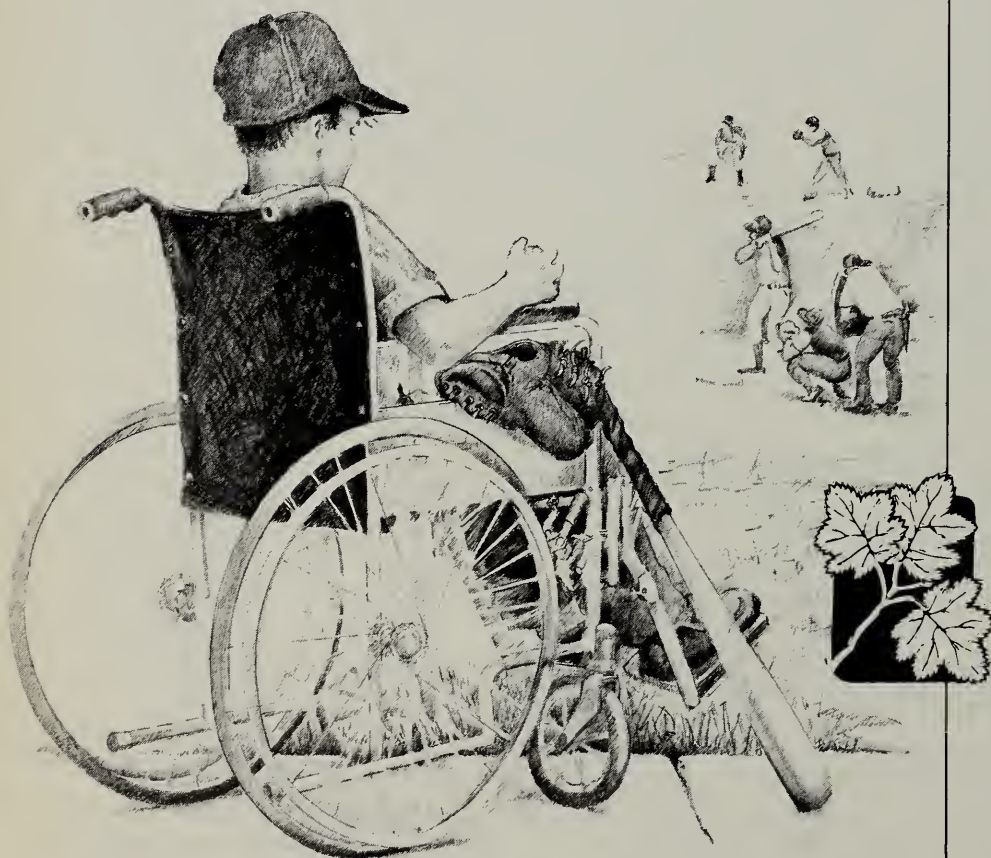
Reports of impairment were slower last year but now have picked up, he added. He expressed the opinion that the rush of reports when the committee was started represented the more visible cases, the "tip of the iceberg"; current reports concern younger doctors in earlier stages of impairment. He noted that DRGs do not cover chemical abuse and suggested the Society might have to set up a loan fund to help physicians who need treatment for that problem.

Another report relating to the Board of Medicine came from the ad hoc committee to study disciplinary regulations. The committee has met three times and is "just getting warmed up," reported chairman Charles M. Caravati, Jr. He forecast a report for the House of Delegates when it meets in November but not before. "You may not like all the recommendations we'll have,"

CONTINUED ON PAGE 362

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he warned. "We're dealing with political realities, and we'll have to yield on some points, such as adding public members to the Board."

## OF FEES, FUNDS AND THE MD SUPPLY

From the Vanguard Committee came prickly issues stemming from the federal government's increasing intrusion into the conduct of medicine. Vice chairman Ira J. Green presented the committee's requests for action. One called for a study of physician availability. Leading off what became a lengthy and complicated discussion, Dr. Mayer commented that the Federation of State Medical Boards has developed a committee to provide for voluntary accreditation of Caribbean medical schools; the Federation should be consulted, he suggested. Dr. W. Leonard Weyl rose to refer to poorly schooled and under-trained medical graduates as "a national problem creating a medical proletariat." Asked Councilor Leon I. Block: What have Virginia's three medical schools done to evaluate the supply of physicians in Virginia? Dr. Dunn rose to describe the "dubious quality of clerkship for offshore medical school graduates"; a uniform, acceptable definition of what is a legitimate clerkship is needed, he asserted, adding that 50% of offshore graduates receive no more training than the one "transitional" year. The matter resisted easy framing for a vote, and Dr. Michael A. Puzak was asked to head a committee to work up a resolution for vote the following day. It read, "RESOLVED, that the American Medical Association investigate the possible effects on the health care of Americans resulting from the influx of inadequately trained physicians and the unavailability of postgraduate training and recommend remedies to the proper authorities at state and federal levels." The resolution was adopted.

Another sore subject referred by Vanguard dealt with freezing fees and cutting federal funds for medical education. Support AMA policy calling for an across-the-board freeze on spending, funding and fees, asked the committee, to replace the singling out of "certain segments of the population." Again, vigorous discussion, and President Kuykendall, asking the councilors to "forgive this editorial comment," was moved to observe that "taxes are too high, the deficit is outrageous, the country is on the verge of bankruptcy. We should not be saying, in effect, Cut everything else, but don't cut money for medical schools, don't cut doctors' reimbursements." To which AMA Trustee Hotchkiss responded, "If they'll freeze everything, we'll support that." Volunteered Councilor Leon I. Block, "I'm not so concerned about my pocketbook. I am concerned about the quality of medical care," and another voice was heard warning that too much fee-freezing could lead to doctor drop-out and two-tiered care. Councilor John A. Owen, Jr., had moved that the Council "adopt a position in support of the AMA in all these matters, including opposition to 1) DRGs for physicians, 2) extension of discriminatory fee-freezing, and 3) reductions in funding for medical education." The motion passed.

## SHORT SUBJECTS

Hearty applause was the Council's reward for the report of Dr. Eugene F. Poutasse, medical director of the MSV Review Organization. Clearly, Dr. Poutasse had been putting in a lot of overtime in an effort to make today's restrictive review

more palatable to MSV members, and the response from his audience indicated that he is succeeding. In the specialty section, plastic surgeon George A. Whipple and allergist Harry A. Mangold rose to praise him. They were followed by Vice Councilor Ira J. Green, who didn't want to discount the fine work of MSVRO chairman Dr. Robert A. Morton or administrator Freeman H. Vaughn, he said, but Dr. Poutasse deserved special credit for "his diplomatic approach, his intelligent organization of criteria, and his assiduous pursuit of the satisfaction of physicians." He called for a round of applause, and it was instantly given. As it ended, Dr. Owen contributed this salute: "When I was involved with the PSRO," he said, "the saying was, 'The PSRO is the last institutional advocate of the patient's welfare.' If the MSVRO is keeping us honest, more power to it, and I'm glad it has 'MSV' in its name."

The Child Health Committee had heard that there was a proposal in a Northern Virginia community to substitute interscholastic athletics for health and physician education in the public school curriculum, chairman Jefferson D. Beale, Jr., reported. The committee endorses not only keeping the curriculum in place but strengthening it, Dr. Beale said. Also recommended: followup reports to physicians who report incidents of child abuse.

Five sections have been developed for the scientific program at the Society's coming annual meeting, said Program Committee chairman W. Kenneth Blaylock. They are imaging (CT, magnetic resonance); cancer (ovarian Ca, lymphomas); cardiology (balloon angioplasty); rehabilitation (stroke patients); and the medical environment (Washington scene, malpractice, corporate medicine). The meeting is set for November 7-10 at the Homestead.

Fresh impetus will be given to the statewide Speakers Bureau this year when the Auxiliary takes over implementation of the program, said Ed DeBolt, the Society's PR pro. He reported on behalf of the Public Relations Committee's chairman, Frederick K. McCune, who was inhospital recuperating from gall bladder surgery. The bright idea to enlist the Auxiliary's help came from Mrs. Bigley, DeBolt related.

The Kentucky Medical Association's program to provide access to medical care for indigent patients is being studied by the Rural Health Committee under the leadership of chairman James L. Patterson, Jr. With a toll-free number and the participation of 2,107 Kentucky physicians, Dr. Patterson told the Council, persons in need of treatment can be referred to a physician for one free visit at no charge (no lab work, injections or medication). The KMA picks up the yearly budget of \$80,000.

"Principles of Cooperation for Physicians and Attorneys," the guidebook jointly sponsored by The Medical Society of Virginia and Virginia's Bar, has been revised, and the new editions should go out to MSV members soon, reported chairman Claude P. Sherman of the State Bar Liaison Committee.

Divorced from the State Health Department and newly wedded to the Department of Health and Human Resources, the state's Medicaid program now has a board of directors, and Dr. A. Epes Harris is the physician on that board. There have been four meetings since March, Dr. Harris told the Council, but he could not yet give an assessment of the new setup.

Next meeting of Council: September 28.

--ANN GRAY



# VIRGINIA MEDICAL

## POLITICAL ACTION COMMITTEE

**Mandatory Assignment:** *We beat it last year but it's coming back!*

Physicians rallied to fight mandatory assignment last year—and won. But to truly understand the threat we still face, see AMA's short videotape of the highlights of the House of Representatives floor debate, including the remarks made by Chairman Rostenkowski of the House Ways and Means Committee, who last spring lead the fight in Congress to institute Mandatory Assignment for Medicare.

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# Improving Outcome of Aneurysmal Subarachnoid Hemorrhage

J. Paul Muizelaar, MD, and Donald P. Becker, MD,  
*Richmond, Virginia*

---

New physiological insights and improved surgical techniques have enhanced outcomes in patients with subarachnoid hemorrhage from ruptured cerebral aneurysms, but, the authors emphasize, early recognition of warning signs plays a crucial role in successful management. The results of intensive treatment as experienced at a large teaching hospital are described.

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**S**UBARACHNOID hemorrhage from ruptured aneurysm is an often devastating event, leading to death or severe disability. On the other hand, a number of patients with subarachnoid hemorrhage enjoy an excellent recovery and go on to lead a completely normal and productive life, but their chances are much better with timely diagnosis and treatment. The following incident illustrates that, once alerted, both physicians and the public can recognize the warning bleed.<sup>1</sup>

In London, Ontario, a first-year resident in neurology was sued by a widow for missing a "warning leak" some two weeks before her husband's fatal hemorrhage. A large judgment was rendered against him by the court and the story was featured in detail in the newspapers. During the next week, eight

patients were referred to an emergency department by their physicians for lumbar punctures, and in five the fluid was bloody or xanthochromic. Notably, three had themselves sought out their primary doctors to report that they thought they had a hemorrhage.

The incidence of ruptured aneurysm is about 11-12/100,000/year.<sup>2,3</sup> By six months, 60% of these patients will be dead, and only 30% reach a good outcome. For Virginia this means that each year roughly 650 people suffer an aneurysmal subarachnoid hemorrhage, 200 of whom make a good recovery and 450 die or remain disabled. These figures are comparable to those for severe head injuries, but there are some major dissimilarities. The first is that after subarachnoid hemorrhage a much larger proportion of patients are in good neurological condition initially, but later deteriorate due to secondary—preventable or treatable—complications. The second difference between severe head injury and subarachnoid hemorrhage is that the former is hardly ever misdiagnosed, while the initial symp-

From the Division of Neurological Surgery, the Medical College of Virginia/Virginia Commonwealth University. Address correspondence to Dr. Muizelaar at Box 631, MCV Station, Richmond VA 23298.

Submitted 6-4-84.

toms of subarachnoid hemorrhage are often not taken seriously, not only by the patients themselves, but, unfortunately, also by physicians.

In this paper we describe how early and intensive management of subarachnoid hemorrhage leads to a major improvement in outcome. The intensive management is partly based upon the same principles for the treatment of severe head injuries which have previously been reported, also in this journal.<sup>4-7</sup> The decision to switch from delayed to ultra-early surgery was taken after analysis of our results with early surgery in Amsterdam and of the literature.<sup>8</sup> This paper will describe the results since the inception of this new program at the Medical College of Virginia in January, 1983.

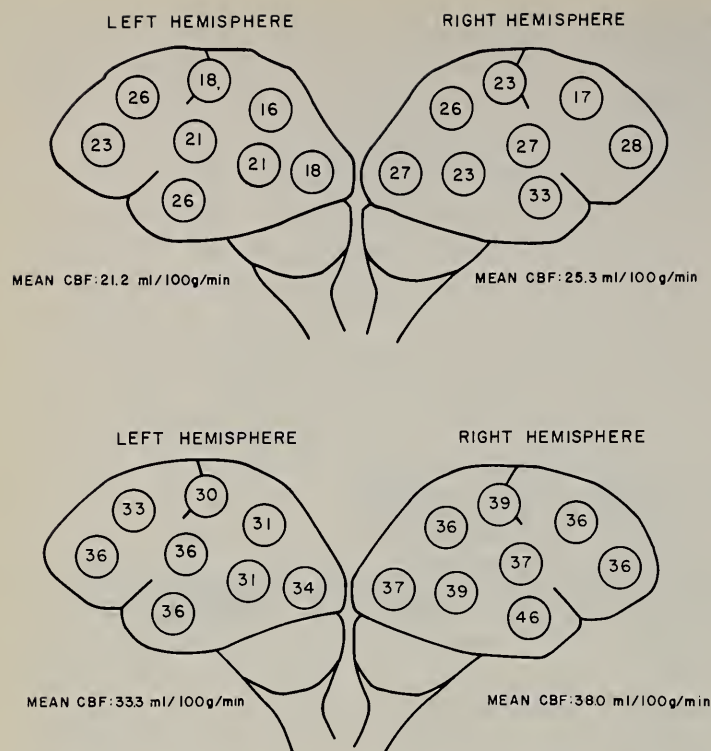
### New Treatment Methods

The two main causes for deterioration and death in patients with subarachnoid hemorrhage are rebleeding and cerebral ischemia. Several treatments have been proposed for the prevention of rebleeding which are still in use elsewhere. In the past the use of antifibrinolytics, such as epsilon-aminocaproic acid (Amicar<sup>®</sup>), has been advocated, although well-designed trials with these drugs had not been performed.<sup>9</sup> Recently, the results of a double-blind, randomized, placebo-controlled, multicenter trial with 479 patients in which we participated have become available.<sup>10,11</sup> They showed that antifibrinolytics indeed reduced the rebleed rate from 24% in the placebo group to 9% in the treatment group. However, in the treatment group many more cerebral ischemic complications occurred, and the outcome after three months was the same in treatment and control groups. Therefore, we cannot recommend the use of antifibrinolytics. Other modalities which have been tried include ligation of the carotid artery in the neck if the aneurysm was in the appropriate distribution, and induced hypotension with oral or intravenous drugs. The connection between the frequency of ischemic complications and these methods has been so obvious that such treatments have practically been abandoned.

There is only one definite measure to prevent rebleeding and that is clipping of the aneurysm. Although most rebleeds and infarctions take place between the 3rd and 18th day after the initial bleed, a number of rebleeds occur earlier, sometimes even within 24 hours. Thus, operation should preferably be undertaken early after the first subarachnoid hemorrhage. Although, the renowned "struggle with the red, angry, swollen brain" has caused most neurosurgeons not to consider early operations, the newest developments have removed most of these

objections against early surgery. First, it has become much easier to work in a very confined space with special new instruments and with the unique illumination and magnification provided by the sophisticated surgical microscopes: much brain retraction is now hardly necessary. Second, the current understanding of cerebrovascular physiology, which is also applied daily in the treatment of severe head injuries,<sup>12-14</sup> has made it possible to shrink the brain to a large extent (by hyperventilation and dehydration with mannitol) while at the same time maintaining adequate cerebral blood flow by hemodilution (also with mannitol and with low molecular weight dextran). It seems that delayed ischemic symptoms develop more rapidly and are more severe after early surgery. The exact cause for this so-called "vasospasm" still needs further clarification, but blood break-down products certainly play a large role in the initiation of the whole process. Therefore, we now advocate "cleaning" all the cisterns completely of blood clots within 48 to 72 hours. Such treatment after this period does not seem to help prevent vasospasm, because it is prior to that time that histological changes occur in the vessels.<sup>15</sup> Smooth muscle cell necrosis and endothelial swelling narrow the lumen, and cerebral ischemia cannot be treated any longer by widening the vessels.

The new treatment of cerebral ischemia due to vasospasm, which consists of raising the blood pressure, clearly carries the risk of provoking rebleeding with an unsecured aneurysm. Thus, early surgery has become necessary to prevent rebleeding from induced arterial hypertension. In the recent past, a variety of vascular smooth muscle relaxants have been tried for vasospasm prevention or reversal, none successfully. Once it had become clear that vasospasm was not a true muscular contraction but vessel wall swelling soon after the onset of ischemic symptoms,<sup>15</sup> new treatments were devised. If it was not possible to decrease the vascular resistance, then blood must be forced to flow through this high resistance vascular bed. Thus, patients with ischemic symptoms are now treated with induced hypertension (blood pressures up to 220/150 mmHg) and with hemodilution.<sup>16,17</sup> The effectiveness of such treatment is demonstrated in Figure 1. In this patient, the onset of severe neurologic symptoms was so sudden that a differential diagnosis of seizures (postictal deficit) or vasospasm was made. Regional cerebral blood flow measurements with a noninvasive<sup>133</sup> Xenon inhalation and washout technique enabled us to make the proper diagnosis. With seizures, the cerebral blood



**Fig. 1.** Cerebral blood flow measurements show, at top, very low values after sudden onset aphasia and right hemiplegia six days postoperatively and, at bottom, one hour later, pharmacological reversal of the deficit.

flow should be high in the appropriate area; with vasospasm it should be low. As shown in Figure 1, cerebral blood flow was low in the central region of the left hemisphere so treatment of vasospasm was begun immediately. The second cerebral blood flow measurement, 45 minutes after the first one, shows that ischemia had been reversed, concomitant with a marked clinical improvement. The patient went on to a complete recovery.

Inducing arterial hypertension and hemodilution is not always as easy as it may seem. Tachyphylaxis may occur with phenylephrine, the drug commonly used to effect hypertension, and peripheral extremity ischemia may develop. To hemodilute the patient it is necessary to keep the central venous pressure high, often 15 to 20 cm H<sub>2</sub>O. Thus there is the danger of inducing pulmonary edema, so cardiac output must be monitored regularly. As soon as cardiac output starts to decrease, central venous pressure must be carefully allowed to drop slightly, and sometimes digitalization is necessary. In some cases excessive urinary output renders maintaining high central venous pressure very difficult so we have to give the patient intranasal vasopressine to limit urinary output. Very close monitoring of serum electrolytes with this type of therapy is required. In the cases in which artificial ventilation and treatment of high intracranial pressure are

necessary, the same principles as those in the management of severe head injuries are applied.<sup>6,7</sup>

The latest substantial development is the pharmacological prevention of vasospasm. As noted above, early cleaning of basal cisterns from blood clots is also effective, but one cannot reach all cisterns in one operation, and pharmacological treatment can always be initiated earlier than surgery. Bay e 9736 (Nimodipine®), a specific cerebral vascular smooth muscle calcium entry blocker, has been shown probably to be effective in improving outcome when given early after subarachnoid hemorrhage.<sup>18</sup> This drug has not yet been approved for sale by the Food and Drug Administration, but further studies with it are continuing at the Medical College of Virginia.

## Results

In January 1983 we began our early surgery program, applying the principles discussed above. To March 1984, we performed 33 operations for intracranial aneurysms. Of those, 26 had a good outcome (79%), two had a poor result (6%), and five died (15%).

One of the patients who died had a major rebleed from a basilar artery aneurysm while we were opening the skull. Although no attempt was made to reach this aneurysm, we still count it as operative mortality. Two other patients died because their aneurysms ruptured during dissection. One had a basilar artery aneurysm, the other was operated early for a giant posterior communicating artery aneurysm plus a middle cerebral artery aneurysm. One patient died suddenly three weeks postoperatively; at autopsy no explanation could be found for her death. The fifth patient died nine days after clipping of her anterior communicating artery aneurysm from intractable bleeding from an arteriovenous malformation in the colon.

Two patients remained disabled (6%). In one patient with posterior communicating and middle cerebral artery aneurysms, a branch of the middle cerebral artery was probably occluded during early surgery, leaving her aphasic and with upper extremity paresis. The other disabled patient was already severely disabled with aphasia and hemiplegia after a bleed from a giant basilar artery aneurysm. She recovered partly (and continues to improve) after clipping of the aneurysm. All the other patients made a good recovery.

Fourteen patients had early surgery, of whom two died and one remained disabled (see above); all others made a complete recovery. Some were able to return to their previous occupations within only

one month after their subarachnoid hemorrhages. Eight patients were treated with Nimodipine to prevent vasospasm. The one patient whose giant posterior communicating artery ruptured during early surgery died (see above), although she did not develop angiographic vasospasm but intractable high intracranial pressure, postoperatively.

As noted above, only four of the five patients with basilar artery aneurysms underwent definite clipping of the aneurysm. One of them died because the aneurysm ruptured during clip placement, and prolonged and deep hypotension was employed to control the bleeding; this patient never regained consciousness postoperatively. The three others improved or recovered completely.

Nine of our patients, a remarkable number, had giant aneurysms of 2 cm or more, a reflection of our position as a tertiary referral center. Although many

Table 1. Results in Patients with Special Aneurysms.

	No. of patients*	Good	Results Disabled	Dead
Basilar artery aneurysm	5	2	1	2
Giant aneurysm	9	7	1	1
Early surgery	14	11	1	2
Nimodipine® therapy	8	7	—	1

\* Several patients are represented in more than one group.

of the operations for giant aneurysms, especially of the basilar artery (Fig. 2) and the ophthalmic artery, were technically difficult, seven of these patients made a good recovery. Another two patients had a subarachnoid hemorrhage from aneurysms of the pericallosal arteries, which is very rare. They were both operated upon early and treated with Nimodipine and made a good recovery. The results are summarized in Table 1.

Fig. 2A (right). Left vertebral angiography shows large aneurysm of basilar artery.

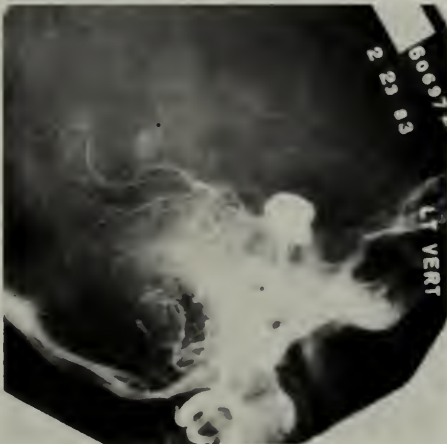


Fig. 2B (below). After clipping aneurysm. Some residual filling due to thick wall at neck of aneurysm but rebleeding unlikely from this area.



**Case Report.** A 39-year-old female had a sudden onset of severe headache without loss of consciousness. An emergency room physician thought this to be acute migraine and prescribed analgesics. Five days later she lost consciousness and drove her car into a tree. When seen in our emergency room one hour later she was conscious and neurologically intact. CT scan showed a large amount of blood in the basal cisterns. She was admitted to the neurosurgical intensive care unit. Some hours later she again had sudden severe headache and lost consciousness for ten minutes. After regaining consciousness and while preparations were being made to place an intracranial pressure monitor, she suddenly lapsed into deep coma, with decerebrate posturing to painful stimuli. She was intubated and ventilated. A new CT scan showed even more subarachnoid blood and moderate hydrocephalus. An intraventricular catheter was inserted. This happened around midnight and the following morning, six days after the first bleed and within 12 hours of the second, third, and fourth bleeds, angiography was performed. This showed aneurysms of the right posterior communicating and middle cerebral arteries, along with moderate spasm of the basilar artery. Immediately after angiography she was taken to the operating room, where a right fronto-temporal (pterional) craniotomy was performed. The initially swollen brain was shrunk down and both aneurysms clipped without difficulty. A third, small aneurysm of the anterior choroidal artery was reinforced with muslin. All clots were removed from the Sylvian fissure, carotid, chiasmatic, interpeduncular, and contralateral carotid cisterns.

After the operation the patient's motor score had improved to localizing. Although we had some difficulties keeping her intracranial pressure below 25 mmHg and maintaining her central venous pressure around 20 cm H<sub>2</sub>O, the patient woke up two days later. Six days postoperatively, she developed a left hemiplegia. Cerebral blood flow measurement showed very low values over the right hemisphere (mean flow 17.6 ml/100 g/min). Raising her mean arterial blood pressure from 90 to 125 mmHg with phenylephrine immediately reversed her deficit and made her cerebral blood flow rise to 41.1 ml/100 g/min on the right side. Occasionally she required vasopressine, and she was kept on phenylephrine for seven days before she could be weaned from it. She was discharged three weeks after her subarachnoid hemorrhage, completely recovered.

## Discussion

New insights into the pathophysiology for cere-

brovascular function and technical improvements have enabled one to treat patients with subarachnoid hemorrhage from ruptured aneurysm aggressively and operate on them early. Early operation is the definitive preventor of rebleeds, and early cleaning of the basal cisterns around the major cerebral arteries may prevent the development of vasospasm. If ischemic symptoms from vasospasm still occur, this can be treated with induced hypertension and hemodilution. Although hypertension has occasionally been applied for ischemia in patients with unclipped aneurysm without untoward effects, it is clear that this can be done in greater safety once the aneurysm is clipped.

The new treatment of aneurysmal subarachnoid hemorrhage is very rewarding. Patients who in the past would have died from rebleeds or large cerebral infarction now have an improved prognosis. Many young and middle-aged patients can make a full recovery to lead normal and productive lives, and it was shown that early surgery and aggressive treatment can also greatly improve outcome from aneurysmal subarachnoid hemorrhage in geriatric patients.<sup>19</sup>

The next step is to make physicians aware of the early symptoms and signs of subarachnoid hemorrhage. There are several warning signs. Generalized, usually sudden, headaches with lethargy, nausea and neck pain secondary to minor leaks occur in 20% of the patients. The mean time between these signs and the major bleed is ten days. Thus, it is imperative that these patients quickly undergo a workup for subarachnoid hemorrhage. Localized headaches and impairment of extraocular movements, secondary to enlargement of the aneurysm, occur in another 20% of patients before a major hemorrhage. All patients who have a sudden, severe headache should at least have a lumbar puncture for examination of the cerebrospinal fluid. Also, patients who call upon their physicians some days later because their headaches do not subside should have cerebrospinal fluid examination for xanthochromia up to two weeks after the onset of their headache. In doubtful cases a CT scan can be helpful, especially early in the course. If a subarachnoid hemorrhage is suspected, the patient should be referred to a neurosurgical center where there is true 24-hour coverage and the full range of treatment modalities is available.<sup>20</sup> Even the suspicion of subarachnoid hemorrhage presents a medical and surgical emergency, and in many cases transport of a patient by helicopter is reasonable and in the best interest of the patient.

Finally, the public needs to be educated about the

symptoms of subarachnoid hemorrhage, as is done for cancer and heart disease. It has been reported that upon careful questioning, 48% of patients with a major subarachnoid hemorrhage indicated that they had had symptoms compatible with warning leaks or local pressure by the aneurysm.<sup>21</sup> Many of these warning signs had been ignored by the patients themselves, but a number also by their treating physicians. As indicated in the story in the beginning of this article, missing minor bleeding is not only detrimental to the patient but may also have grave, judicial consequences for the doctor.

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## VIRGINIA AUTHORS

**Cardiac Arrest due to Anesthesia.** Richard L. Kennan, MD, and C. Paul Boyan, MD, *Richmond*.

Cardiac arrests due solely to anesthesia were studied in a large university hospital over a 15-year period. There were 27 cardiac arrests among 163,240 anesthetics given, for a 15-year incidence of 1.7 per 10,000 anesthetics. Fourteen of these patients (0.9 per 10,000) subsequently died. Detailed examination of the data from these 27 patients revealed that the pediatric age group had a threefold higher risk than adults, and that

the risk for emergency patients was six times that for elective patients. Failure to provide adequate ventilation caused almost half of the anesthetic cardiac arrests, and one-third resulted from absolute overdose of an inhalation agent. Hemodynamic instability in very ill patients was an association in 22%. Specific errors in anesthetic management could be identified in 75%. Progressive bradycardia preceding the arrest was observed in all but one case. *JAMA* 1985;253:2373-2377.

# Medicine of the future

Text and illustrations by  
Ernest Craige, MD, *Chapel Hill, North Carolina*

Since the case analysis method has been found to be so useful in medical instruction, I have selected an example of a case from the medicine of the future to illustrate where we will be a few years hence.

Mrs. R.D., a 57-year-old housewife from a town in eastern North Carolina, has gone with her husband for the weekend to Morehead City, a town on the coast noted for good fishing and shore dinners. Following a heavy meal at the Sailor's Pride Restaurant, she and her husband are walking back to the motel, when she suddenly notices a tearing sensation over the left chest (Fig. 1). The husband is alarmed, fearing a heart attack, and calls the rescue squad. It responds promptly, and although the paramedics do not think Mrs. D. has had a heart

attack, they advise that she go to the hospital to have this or any other serious condition ruled out. Unfortunately, the local hospital has been closed for over a year owing to low bed occupancy, so the paramedics recommend that the patient be transported by helicopter to a large tertiary medical center some distance to the west. This move is quickly accomplished, and the patient, now asymptomatic but somewhat frightened by the experience, is whisked through the Emergency Room to the CCU.

She is greeted on arrival in the unit by the ward team, which consists of a diagnosis-related groups (DRG) technician, level I, the ward administrative leader (WAL), the ethicist, and a person of indeterminate sex who introduces him-

(her)self as the decision-tree analyst (DTA) (Fig. 2). This last team member determines that the problem is possibly of cardiac origin and summons Intern Jones through his beeper. Jones is in the residents' recreation room having a Coke with Resident Kelly of the Neurology Department. These two young doctors wear the emblems of their specialties on their lapels. The stethoscope and reflex hammer have long since ceased to be used by the younger professionals, and neither Drs. Jones

nor Kelly has ever actually seen one of the instruments. Examples of the archaic devices are, however, on display in an exhibition case at AVCUMC, the Audio-Visual Communications Center, formerly known as the library. On learning through the computer display terminal of the patient's arrival, Intern Jones orders a ROMI or Rule Out Myocardial Infarction protocol. This consists of a series of examinations: ECG, enzyme determination, stress test, rest-stress MUGA, echocardiogram, Holter, and—if any of the results are positive—a cardiac catheterization, or—if they are all negative—a catheterization anyway. These studies are efficiently completed in the next three days, whereupon Intern Jones is notified of the results, which are entirely normal.

Dr. Jones then punches into the computer an order for a GI workup. The GI team is extremely conscientious about cost containment and has compressed their thorough workup into a 24-hour period. During this time they accomplish a "Golden Spike Endoscopy" so called in the trade because of its resemblance to the celebrated construction of the transcontinental railroad, which, as the readers will recall, started from the west coast and east coast, with the construction teams ultimately meeting at Ogden, Utah. In our case, the endoscopists start from either end of the GI tract and meet somewhere in the ileum. Meanwhile, a brace of liver function tests and a pancreatic scan complete the workup, and the patient is pronounced "sound as a yen" (the dollar having declined by then to a token figure).

Since the two main organ systems that were suspect according to the DTA have been found trouble free, Intern Jones turns in desperation to his colleague, Resident Kelly in Neurology, whom we met earlier. She is willing to take on the



Fig. 1. The patient notices a tearing sensation.



Fig. 2. The ward team greets the patient.

case but insists that before she can do so an SNA 6 must be carried out, consisting of a CT scan, EEG, CT scan with contrast, Dopplers of the carotid circulation, and an air contrast ventriculogram. Intern Jones punches the first of these requisitions into the computer terminal, but much to his dismay, a buzzing sound is emitted, and the computer flashes this message:

Re: PATIENT MRS. RD  
To: INTERN JONES

Implementation of CT Scan requisition will raise your LT/DRG (lab test/DRG) ratio to 1.89 (upper permitted limit = 1.80). Therefore, your salary will be reduced by \$35. You have 30 seconds to reconsider this requisition.

Dr. Jones immediately cancels the requisition and tries several less expensive tests. All, however, are aborted for similar reasons.

He is panic stricken by this thwarting of his professional impulses and finally seeks the button on his computer that he had never touched before: WHEN ALL ELSE FAILS, PUNCH THIS BUTTON.

In a moment the computer screen flashes the following instructions: GO SEE PATIENT. TAKE HISTORY. DO PHYSICAL EXAMINATION.

Although Jones had received instructions in these procedures, he

actually had never had to do any of them. Nonetheless, he obediently makes his way to the bedside of the patient, introduces himself, and takes out his questionnaire, from which he will generate the history. The patient seeks to interrupt him from time to time, but he presses on relentlessly to fill all the blank boxes on his history-taking form.

Finally, however, Mrs. D. interjects something to the effect that she thinks she knows what indeed happened in Morehead City and wishes to make a statement. Jones grudgingly allows her to speak. "When my husband and I went to the beach I took my oldest bra so as to be comfortable. I think what happened was that it tore—broke down—and that's what I noticed on the way to the motel."

Intern Jones is delighted with this revelation and already imagines a splash in the medical literature entitled "Ruptured Foundation Garment Masquerading as Heart Attack." The ward team, however, does not share his enthusiasm, since there is in the DRG listing no place for this diagnosis, and the patient's bill is by now of astronomical proportions.

An immediate high-level conference is summoned involving the hospital administrator, the DRG supervisor, and the ward attending, now drawn into this case for the first time. The problem is solved by the DRG supervisor, who recalls an obscure athletic injury entitled "Pectoralis Muscle Strain," under which the diagnostic studies can be conveniently covered.

The third-year student volunteers to take the patient to J. C. Penney's to be fitted for a new Gi-BRAAlter Bra which carries a five-year warranty, and the patient goes home greatly satisfied with the excellent care that she has received at the medical center (Fig. 3).

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Fig. 3. Patient goes home satisfied with her care.

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# Shoulder Joint Replacement

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*Richmond, Virginia*

**S**HOULDER joint replacement has much to offer the properly selected patient. The surgical procedure is more difficult than the standard hip or knee replacement, and its results are markedly dependent upon patient cooperation and participation in the postoperative period. This procedure differs from knee and hip replacement also in that its success requires a vast range of motion in all planes. Pain relief is the primary goal, with increased range of motion and improved function being secondary gains. We have over the past five years performed 23 shoulder replacements in 22 patients (one bilateral case).

## Patient Selection

Since the shoulder is not a weight-bearing joint, osteoarthritis of the shoulder is not common, yet there are many patients who would benefit from this procedure. The preoperative diagnoses in our 23 cases were as follows: rheumatoid arthritis, 6; post-traumatic arthritis, 10; osteoarthritis and/or avascular necrosis, 6; and rotator cuff arthropathy, 1.

Rheumatoid patients must be carefully evaluated as often a rotator cuff tear is present; this must be concomitantly repaired or the end result may well be impaired shoulder function. We recommend shoulder arthrography when a rotator cuff is suspected by clinical examination. Those patients with marked distortion of anatomy due to old trauma and those with massive rotator cuff tears are likely to do less well than those patients without these problems.

Shoulder replacement success depends in large measure on the willingness of the patient to work hard in rehabilitation. Our patients understand that the procedure itself will greatly benefit them with regard to pain; however, they also understand that the results measured by function, range of motion and strength are largely dependent upon their post-

operative efforts. Herein lies the importance of patient selection, as patients who are willing to work harder in the postoperative period are likely to be more pleased with their results.

## Technique

In all of our 23 cases, we have employed the conforming-surface shoulder replacement designed by Dr. Charles S. Neer.<sup>1</sup> This prosthesis very closely restores normal anatomy and we have been very satisfied with our results. The replacement has two components: a polyethylene socket for glenoid resurfacing and a variably-sized head prosthesis with an intramedullary stem (Fig. 1). Methyl methacrylate was used in all instances of glenoid replacement, but in only seven of 23 proximal humeral replacements.

The surgical procedure is performed under general endotracheal anesthesia in the beach chair position. The joint is approached through a long deltopectoral incision without disturbing the deltoid origin and the joint is entered anteriorly by dividing the subscapularis muscle and capsule. The surgical procedure at this point depends on the pathology encountered. In our patients with acromioclavicular arthritis, the distal clavicle was excised (8/23) or an anterior acromioplasty was performed (3/23).

A surprisingly small amount of the humeral head is then removed and the glenoid examined; glenoid resurfacing was required in 17 of our 23 cases. Surgical exposure is quite limited because of anatomical constraints and the care which must be taken to avoid rotator cuff damage during the procedure. (If the rotator cuff suffered a tear prior to surgery, it is repaired prior to placing the humeral component.)

The glenoid component is cemented into place following appropriate preparation and the humerus is reamed to the appropriate size and a trial prosthesis inserted in 30°-40° of retroversion. If the fit is good, no cement is needed with the final prosthesis; we used cement in 7/23. Blood loss at surgery averaged less than 500 cc, although 13 of our patients were transfused prior to discharge.

On average a two-week hospitalization is required. The time of discharge varies depending on when the patient reaches the goals outlined by the surgeon for that particular patient. Patients having the replacement for osteoarthritis are likely to be discharged sooner on a home physical therapy or outpatient program than those in whom a more difficult reconstruction was required.

During the rehabilitation period, the physical therapist must work under the close supervision of

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Submitted 11-15-84.

the physician, as each patient's postoperative therapy depends on the conditions dealt with at surgery. When rotator cuff repair or advancement is concomitantly performed, active exercises are postponed for six weeks to allow healing of the cuff mechanism, and all exercises during that period are passive in nature.

Technically, the shoulder replacement procedure is difficult and should be undertaken only by a surgeon with considerable shoulder surgery experience (Fig. 2).

## Results

Our 22 patients ranged in age from 25-86 years, with a mean of 62. Six of the 23 replacements were performed in men and 17/23 were on the dominant side.

Of the 22 patients, 24% said they had never had pain; the rest gave a history of occasional pain, pain following heavy use, or night pain. In all of the latter, relief of pain was achieved.

Followup questionnaires completed by these patients revealed that 50% rated themselves as "much better" postoperatively and 50% as "better". None said they were worse. Eighty-three percent returned to their usual work and were able to use their arms at shoulder level. Sixty-seven percent stated that the use of the operative arm was the same as the other, and 92% could comb their hair using the operative arm. Range of motion improved, with the average forward flexion preoperatively of 63° increasing to 125° postoperatively, and 40% of the patients achieved 140° or more. External rotation increased from 3° preoperatively to 32° postoperatively on the average.

There were no wound infections or perioperative deaths in this series; however, there were three complications, all requiring further surgery. The first occurred in a 59-year-old patient with severe rheumatoid arthritis who sustained a tear of the rotator cuff six months postoperatively which required repair. The second was in a 65-year-old patient with osteoarthritis who dislocated the shoulder while exercising at home ten weeks postop; he required a revision of the humeral component with an excellent final result. The third complication occurred in a 66-year-old patient who underwent replacement four years following a four-part fracture dislocation; she subluxed anteriorly ten weeks postop and also required a humeral revision, with an end result rated as satisfactory.

In the followup period of two years, none of the patients deteriorated with regard to pain or function from the early postoperative period.



Fig. 1. Diagram shows humeral and glenoid components of total shoulder prosthesis.



Fig. 2. Anteroposterior roentgenogram of shoulder shows Neer II humeral prosthesis and glenoid two years after total shoulder replacement.

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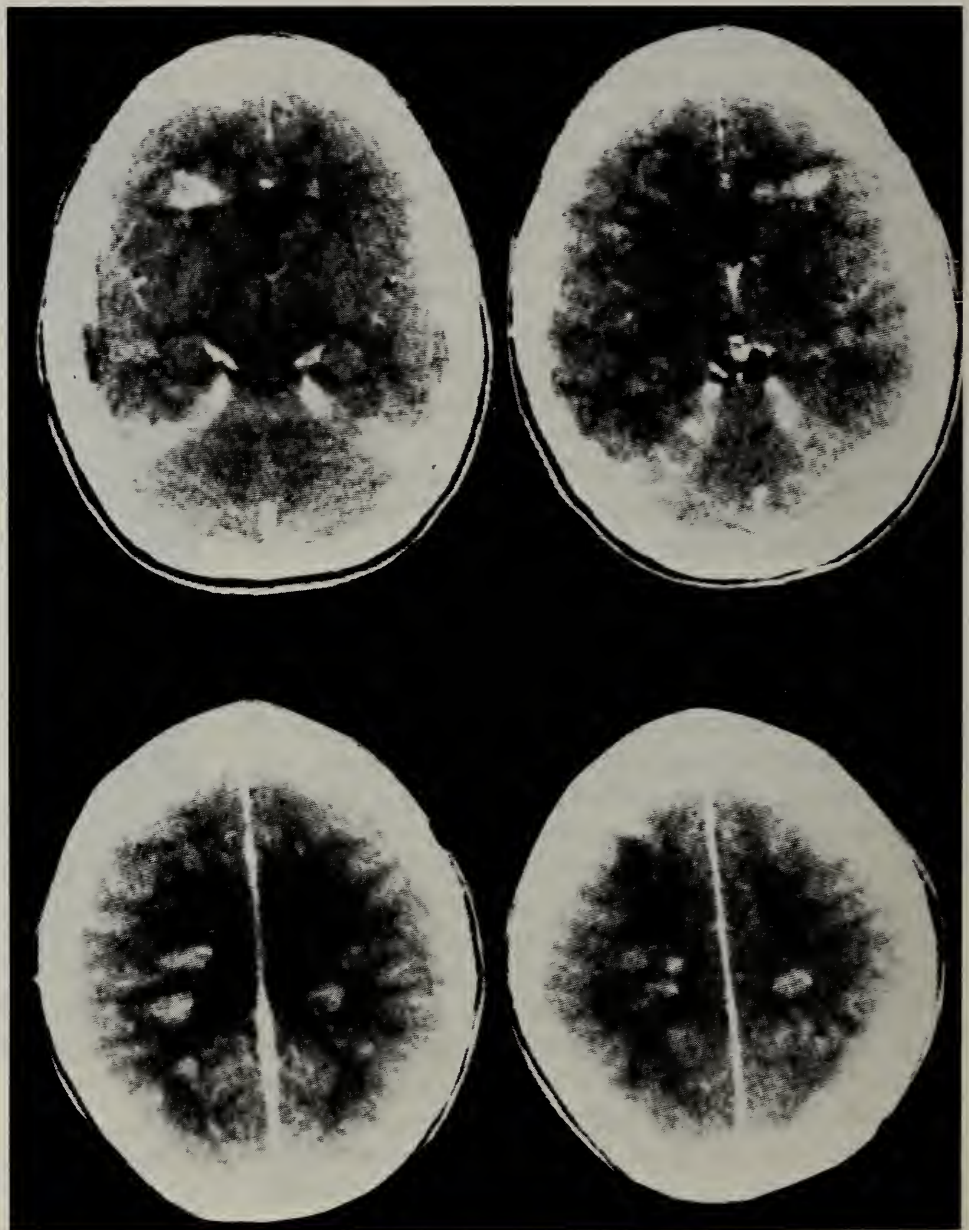
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# Can You Diagnose This?

A medical puzzle prepared by  
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A 22-year-old white female presented with a two-week history of left arm weakness. On physical exam she was found to have ankle clonus and a positive Babinski sign on the left. She was afebrile and had a normal white blood cell count. Shown below are images from a contrast enhanced CT scan of the patient through the level of the lateral ventricles. What was the diagnosis?

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DIAGNOSIS/DISCUSSION ON PAGE 386

# Role of Barium Enema in Diagnosis of Acute Appendicitis: Case Report

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THE BARIUM ENEMA can be a useful adjunct to the clinical findings in the diagnosis of acute appendicitis.<sup>1,2</sup> Of patients operated upon with the diagnosis of acute appendicitis, 15%-30% have a normal appendix upon exploration; this figure rises to as much as 45% in women of childbearing age.<sup>3,4,5</sup> Although the barium enema is utilized in an effort to reduce the incidence of unnecessary surgery, the study is not a specific one.

## Case Report

A previously healthy, 28-year-old woman was seen for abdominal pain. She had no prior history of abdominal surgery, gynecological infection, or use of a diaphragm or intrauterine device. On physical examination, the abdomen was soft and only slightly tender, with no rebound or guarding, and active bowel sounds. Temperature was 37.3° C. Pelvic examination revealed a whitish discharge and slight right adnexal tenderness. A rectal examination was normal. A wet prep was positive for *Trichomonas*. The white blood count was elevated to 15,600 with a shift to the left. She and her husband were treated with metronidazole.

She was seen a second time nine days later complaining of right lower quadrant abdominal pain. This time the temperature was elevated to 37.6° C. The pelvic examination suggested induration high on the right without a definite palpable adnexal mass. The abdomen showed tenderness to deep palpation in the right lower quadrant in the region of McBurney's point without rebound or mass. A barium enema demonstrated considerable cecal spasm, with filling only during manual com-



Fig. 1. Filled film from barium enema shows irregularly contoured cecum with mass effect at caput.

pression. An irregularly contoured caput cecum was demonstrated with an impression along its base (Fig. 1). During the examination, the patient experienced excruciating pain upon cecal compression. The findings were interpreted as consistent with appendicitis.

At surgery, adhesions were noted along the right lateral abdominal wall, and the appendix was adherent to the cecum (having the appearance of a previous acute appendiceal process). The cecum was inflamed, hyperemic, and edematous. Both fallopian tubes were markedly inflamed, with the ovaries and uterus appearing normal. Cultures from the peritoneal cavity and cul de sac showed no growth of microorganisms.

The operative diagnosis was acute bilateral salpingitis with secondary periappendiceal inflammation. The appendix was removed and at pathology showed chronic periappendicitis.

## Discussion

The findings of an extrinsic cecal mass and non-filling or incomplete filling of the appendix on barium enema are highly suggestive of acute appendicitis. However, there are many causes of false-positive studies.<sup>6</sup> Several of these arise from pelvic structures, including tubo-ovarian abscess, pelvic

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hemorrhage and adhesions, endometriosis, ovarian cyst, *Yersinia enterocolitis*, regional enteritis, small bowel obstruction and tumors.

About one-half of all the false-positive diagnoses for appendicitis in women are identified at surgery as pelvic inflammatory disease (PID). When the patient's history includes vaginal discharge, dyspareunia, or dysmenorrhea, the physician should be suspicious that PID or a tubo-ovarian mass is the cause. Tenderness on motion of the cervix is not pathognomonic of PID; it simply means that inflammation is present in the pelvis, possibly caused by PID, appendicitis, or another problem.<sup>7</sup> Nonfilling or incomplete filling of the appendix is not a completely reliable sign, since 5%-10% of normal patients show non-filling during the barium enema examination.<sup>2,7,8</sup> Conversely, 90-95% of patients with a normal appendix will show visualization.

It should be emphasized that despite the lack of complete specificity of the barium enema examination, it may be useful in ruling out appendicitis. If the appendix does not completely fill and the bulbous tip is not demonstrated, the possibility of appendicitis cannot be excluded. A barium enema is safe, even with acute appendicitis, since free perforation into the peritoneal cavity is rare.<sup>7</sup> In the appropriate clinical setting the examination may be an extremely useful procedure to visualize a normal appendix and hence prevent unnecessary surgery.

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## Can You Diagnose This?

Answer to puzzle on page 384.

### Diagnosis

Multiple sclerosis

### Discussion

The computed tomographic scan following intravenous contrast administration demonstrates multiple areas of abnormal contrast enhancement which are found in the white matter distribution of the frontal and periventricular regions.

Differential diagnosis includes inflammatory disease, neoplasm, and acute phase of a demyelinating disease like multiple sclerosis (MS). Inflammatory disease was excluded by CSF examination, including culture and counter immunoelectrophoresis. The distribution of contrast enhancement would be unusual for both infection or neoplasm, though rim-like enhancement around the ventricles may be seen with ventriculitis. No mass effect is present, which also militates against the diagnosis of neoplasm. The findings on CT scan are classic for multiple sclerosis, with multiple areas of low density mixed with areas of abnormal contrast enhancement localized to a white matter distribution.

On CT, multiple sclerosis may manifest itself in one of several ways—nonspecific cortical atrophy; transient focal lesions that are low in density but that enhance with contrast; lesions low in attenuation that do not enhance with contrast; and, very rarely, mass lesions with contrast enhancement.<sup>1-3</sup>

Computed tomography has proven a valuable tool in diagnosing MS. Contrast enhancement is seen in about 30% of patients with MS. Higher rates of abnormal contrast enhancement have been reported when 1) patients are scanned in an early acute or relapsing phase of the disease, and 2) when high volumes of contrast are utilized (60-80 grams of iodine) with delayed scanning (one hour delay following contrast administration).<sup>4</sup>

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# VIRGINIA MEDICAL EDITORIAL

## Medicine's Triad

**T**O BE a physician is an education, a career, and a moral condition. These are our assets, and these are our liabilities. The moral condition determines our actions. Each physician arrives at his or her moral condition through the exposures and experiences of education and career.

Four people influenced immeasurably my moral condition: my father, Dr. Charles Nelson, who died when he was president elect of the Richmond Academy of Medicine; Dr. J. Robert Massie, with whom I lived after the death of my parents and who died while he was president of the Academy; my uncle, Dr. Kinloch Nelson, who was president of this Academy and dean of the Medical College of Virginia when I attended it; and Dr. Reuben Flocks, who was my chief of urology at the University of Iowa and was a dominant man both in American urology and organized medicine. Through these four I can trace the development of my moral condition.

I can best define my moral condition as charity, that love of humanity with which physicians are inculcated. This love of humanity, or charity, is what dictates our relationship with our patients and our colleagues. This is what gives us our ultimate responsibility and determines our actions.

Excerpted from the presidential address delivered before the Richmond Academy of Medicine on January 8, 1985, in Richmond.

A second part of the moral condition is honesty—honesty with our patients—the need to be frank, open, and caring with them—and honesty in dealing with our colleagues. There is no profession that depends more on the word of one colleague to another than medicine. One must also be honest with one's self, to understand the limitations of one's abilities. Honesty also demands the context of reality. No matter how idealistic we may be, we need to face the realities of the world.

A third factor in my moral condition came when I was a beginning medical student listening to the opening address of the dean of the medical school and heard the doctrine, First do not harm. I don't think the public understands that one of the premises that physicians live by is this doctrine of First Do Not Harm. This applies not only to our patients but to our dealings with all organizations and aspects of society. It is a long-standing tradition of medicine and physicians.

Its corollary I learned from Dr. Flocks, whose whole premise of life could also be summed up in four words: Do What Is Right. Doing what is right demands a careful study of the situation, to determine the best course of action and then move positively forward. It demands that we proceed onward with what is an appropriate and positive response and not sit back and watch, not be reactionary. This applies not only to caring for patients from day to day but also to our interactions with

state and federal governments and society as a whole.

**T**HE second component of being a physician is education. By the nature of our education we have a tremendous burden of responsibility placed on us. Our education involves the total pathophysiologic course of disease, to try to help the sick and alleviate suffering, to try to heal, to try to do what we can to see that life is pleasanter.

Our education puts us in a unique position in our society. We are the only people who have the knowledge to see the Big Picture of what's going on in medical care and how these actions affect the individuals of our society. This is a responsibility we have been given, and it is also a responsibility we have earned through many years of education. This responsibility, which sets us apart from the health planners, the legislators and the lawyers, demands that we interact with the legislative and political process.

It requires also an attitude of humility, rather than arrogance and pride. Of course, medicine is an education in humility. There is nothing more humbling than coming face to face with the laws of God and nature. Humility does not mean that we shouldn't go out and strive to do the best we can for

our patients in the society we live in. We need to stand up for what we think is right on the basis of our education and our moral condition.

**T**HIRD, being a physician is a career, and a career cannot be separated from economic rewards or achievements. It is hard to strive without economic considerations. At the present time, we are under attack from all sides. We are being blamed by the government for inefficiency. We are being blamed for unnecessary surgery. We hear the statement over and over again that because of the way doctors have behaved in the past, we are going to emasculate the doctor. We are going to remove the doctor from power, and we are going to get control of the physician. People who would say this do not understand what a physician is.

I see physicians not as people trying to amass the greatest possible wealth but as physicians trying to take care of patients. Our society needs to compensate fairly those people who accept this responsibility, and our society will do so as long as physicians continue to be responsive to the needs of the community.

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## The Unending Mandate

**E**ACH OF US as a physician has this mandate: "Through various ethical, transitional, legislative and operational configurations, quality medical care in this country is the responsibility of the medical profession."<sup>1</sup>

Is this mandate ended? Paul Starr in his Pulitzer prize winning book, *The Social Transformation of American Medicine*, wrote that the mandate that Americans needed more medical care and that it could best be organized by medical professionals and private voluntary institutions ran out in the 1970s. Economic and moral problems became more important than scientific progress. Rising costs of care, slow economic growth, a diminished faith in the efficacy of medicine, and other factors were all cited.<sup>2</sup>

Before examining the assumption, let us clarify one item. Doctors regard the cost of medical care as the primary problem in medicine.<sup>3</sup> In 1984, without

doctors' fees, the health care bill would have been cut by only four percent (4%).<sup>4</sup> The government spends \$3 to run the Medicare program and \$98 for hospital and nursing home charges for every dollar spent for doctors' fees. The physician is not the culprit causing the escalating health care costs in the country.

Cotton Lindsay, Professor of Economics at Emory University, suggests that we simply are utilizing more health care than before.<sup>5</sup> He acknowledges that some costs are rising. The increases are due to the structure of the Medicare-Medicaid Act of 1965, demographics, price increases for health resources, the technological revolution, scientific research, and the inflationary pressures of health insurance that push patients toward the hospitals. Also we can't forget the sick patient who rightly says, "Doc, I don't care what it costs. I want the very best."<sup>6</sup> Another expense to be considered is that required by defensive medicine. It has been estimated that defensive medicine costs \$15.1 billion annually, far more than the total judgments against physicians.<sup>7</sup>

Adapted from the presidential address delivered before the Roanoke Academy of Medicine on January 7.

What solutions are being proposed to the cost problem? The correlative question is Should quality be sacrificed for economy? The DRG program will not solve the problem, for it focuses on ancillary services and length of stay which comprise less than 10% of the cause of the problem. The DRG system is designated to reduce the length of stay without a concomitant reduction in hospital capacity.

Several authorities have noted that the health care system will have to shrink, especially the inpatient component, if the system is to survive. The shrinking of the system will also include limiting the training of physician specialists and rationing expensive technologies and intensive services for some patients.<sup>8,9</sup>

Businesses are restructuring their health benefit plans, HMOs and medical/business health care coalitions are being formed. There are now a total of 134 such coalitions in 39 states, only 75 of which include hospitals as members, and businesses dominate 127 of the coalitions.<sup>10</sup>

Preventive medicine must be encouraged. Authorities suggest that at present there appears to be no evidence of commitment by the government to direct acute-care spending to programs that would reduce the risks now posed by our environment, or to increase spending on preventive health measures.<sup>11</sup>

Professional liability was mentioned earlier. Legislation is pending which has both advantages and disadvantages. Increasing premiums, for some specialties now over \$50,000 per year, is no solution for someone must pay these costs. Other possible alternative solutions include maloccurrence insurance and patient compensation commissions. The existing tort system is flawed, expensive, inefficient and unfair, serving neither the patient nor the physician.<sup>12</sup>

Additional concepts are being proposed to counteract increasing medical expenditures. A plan called MESH is a medical staff-hospital joint venture corporation.<sup>13</sup> Congress has directed HCFA to report in 1985 on the feasibility of paying physicians and hospitals together in one lump sum for each hospital admission. Medicaid programs are turning to HMOs and DRGs.<sup>14</sup> The Blues are replacing UCR payments with a relative-value fee schedule. PPOs, another name for negotiated fee schedules, is attracting the Blues and others. The Blues are involved in over 100 HMOs in over 21 states and are also testing DRG plans. Other private insurance companies are utilizing HMOs and PPOs. By 1994 at least 800 HMOs will exist,<sup>15</sup> and as many as 70%

of Americas may be enrolled in some kind of prepayment plan.<sup>16</sup>

Of particular interest is the future role of the physician in the hospital. Is the mandate for significant physician involvement in quality hospital care ended? Increasing competition between hospital and staff, even between the staff members of an individual hospital is now an everyday reality. Predictions suggest that medical staff organizations will serve in adversarial capacities to hospitals. By 1994 the entire concept of the medical staff hospitals is expected to change. Staffs will be defined (closed). Core staffs will be larger. Hospital staffs will be more organized and have defined responsibility and accountability. Staffs will be monogamous and will manage as well as provide care.<sup>17</sup>

Hospitals may no longer exist to implement the wishes and needs of its medical staff and may view physicians as hired help. With more physicians available, the temptation will be great for physicians to abrogate their freedom of choice and sign away their professional birthright in hospital contracts.<sup>18</sup>

**I**S OUR MANDATE ended? The issues which have only been listed are indeed formidable. However, the issue that at least for me causes the greatest concern is that of the ethical dilemmas we face. The health profession is assuming a corporate structure. What are the ethical implications of this change? Is it possible that the corporate health profession will enter a moral vacuum?

Obviously, in the health care profession today a significant determining factor of our decisions having inherent ethical implications is money. In April 1984 in a newspaper commentary, Bob Willis said, "What is the primary motivation of American physicians and other health care providers? Is it to benefit their fellow humans, or is it to make money?"<sup>19</sup> More pointedly, Dr. Ralph Cranshaw, Chairman of the AMA's Fifth National Conference on the Impaired Physician was quoted as saying, "Doctors who have an uncontrolled appetite for power and money are as impaired as their colleagues who are addicted to alcohol and drugs."<sup>20</sup> The import is that financial concerns will replace quality.

Dr. Ed Pellegrino reminds us of the specific relationship that we as physicians have with our patients which no other profession possesses. This relationship is ethical and allows the physician to decide what is right and good for a patient. The decision is made in the best interest of the patient; not for knowledge, not for society, nor for the

physician's self-interest. Can this mandate end? The practice of medicine is basically an ethical enterprise and to remove medicine from this setting to a corporate status can destroy the physician/patient relationship. Promising to act in the best interest of the patient, when the patient is in need and vulnerable, makes medicine a ministry, not merely a clinical science, or a source of income.<sup>21</sup> The physician/patient relationship and the concern for the health of our people commands that we be involved in the major health decisions which are currently being made.

Or perhaps we should not get involved and simply agree that "Death after all, is the ultimate economy in health care."<sup>22</sup> Who, then, shall live or die under the new dispensation that puts economy first in health care? One congressman recently told a group of physicians that doctors should be responsible for rationing health care!

AMA President Dr. Joseph F. Boyle summed it up for us: "Current trends toward denial of care involve a new and steady commitment to our fundamental and professional ethic. While physicians should be conscious of costs and not provide or prescribe unnecessary services, the health and welfare of patients, rather than economics and politics, must be the first consideration."<sup>23</sup> That is the magic, the answer "in this most mad world that sues and wins for a lack of a test or an x-ray—a world that demands use of all the latest technology and medical care, but after healing occurs says, 'Sorry, it's the bottom line that counts,' and that bottom line is dollars and days, not recovery and quality. 'It took you too many days and too many dollars to get the job done. After all, doctor, it's the bottom line that counts.' "<sup>24</sup>

**I**S THE MANDATE ended? What is ahead? Presently we see merely puzzling reflections in a mirror and only time will produce the whole of reality. Yet the future will not only be challenging but exciting.

There will be more cost shifting from the federal government to the state and to private patients. Legislative coercion will continue. Prepayment, another means of cost shifting from the sick to the population as a whole, will increase. Whatever system evolves to pay for health care will probably include the private sector, specifically the medical industrial complex.<sup>4</sup>

People who are working within corporations are becoming more involved in the nation's health. The independent hospital may be on the verge of extinction. This shift of expenditures to private control may result in corporate financing whose interests

will be determined by the rate of return of investments. Recent estimates suggest that by the end of the decade the medical industrial complex will be capturing close to 4% of the gross national product. The true giants of the medical industrial complex are certain insurance and pharmaceutical companies, any one of which could buy and sell a Humana or another chain in an afternoon. The danger is that they will control the system that is responsible for that fundamental right of life—the best health care society can offer; dangerous because they are primarily concerned with questions asked by their shareholders. The best medicine is practiced in full view of medical students, residents, and peers, without regard to cost or computer print-outs.<sup>4</sup>

Of all the things we have considered, none are really new. They are schemes which were previously attempted. But two new areas are presenting challenges to us. Since 1965 we have more than doubled the output of physicians from medical schools, and as noted, corporate enterprise in the health care system is on the rise. My concern is best expressed by Paul Starr: "The rise of the profession required internal cohesiveness and strong collective organization. Yet rising pressures now threaten to drive a wedge between different segments of the medical profession. The prospect is not simply for the weakening of professional sovereignty, but for greater disunity, inequality, and conflict throughout the entire health care system."<sup>2</sup>

Secondly, the surplus of physicians will bring stiffer competition and aggressive marketing. Younger physicians will accept salaried positions in the medical industrial complex to get on with their careers and pay off their debts. The physician will be expected to produce for the corporate structure or practice elsewhere.<sup>2</sup> Cohesiveness and quality of care will be threatened.

**I**S OUR MANDATE ended? As a profession that cherishes our special relationship with our patients, that believes in a moral matrix of health care which binds all who profess to heal, we must not permit the cohesiveness of our profession to be dissolved. Neither external pressures, monetary incentives, nor personal motives must be allowed to polarize us. The State of Virginia and indeed our nation need the guidance of our profession. We must involve ourselves in the decisions made about the care of our patients at all levels. If the private sector wishes to help bear the cost of medical expenditures, so be it—as long as the physician can help make the decisions, general and individual, that affect our patients.

As Dr. Alexander McCausland of Roanoke said to me recently "Ours is a great profession, the greatest ever brought forth by civilization." The nirvana of our health care system will be attained when the health planner, the health manager, and the physician can function together to enhance the care of the patients who entrust themselves to us in their time of need.

That is the challenge, that is the goal. If need be, that is the struggle. That is our mandate. The mandate is not ended but only begun. There can be and must be no other solution.

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## Membership gain cited

At the recent AMA Conference on Leadership in Chicago, Dr. C. Barrie Cook, Fairfax (left), received a plaque in recognition of The Medical Society of Virginia's increase in AMA memberships during Dr. Cook's presidency 1983-1984. The plaque was presented by Dr. John Coury, chairman of the AMA Board of Trustees.



# OBITUARY

## A. Ray Dawson, MD

Dr. Alonzo Ray Dawson, long identified with physical medicine and rehabilitation in the Richmond area, died April 10 in Richmond at the age of 81. He had retired in 1973.

Born in Reedville, Dr. Dawson attended Virginia Polytechnic Institute and the College of William and Mary and received his medical degree from the Medical College of Virginia in 1929. He then trained at St. Elizabeth's and Walter Reed General hospitals in Washington, D.C., and at the Mayo Clinic and New York University.

After starting a private practice in Warsaw, Virginia, he served the Veterans Administration hospital in Chillicothe, Ohio, then was involved in industrial and insurance medicine. He entered World War II service in 1942, emerging four years later as a lieutenant colonel. Rejoining the VA, he came to Richmond and from 1948 to 1965 was chief of the physical medicine and rehabilitation service at the McGuire Medical Center. He also joined the MCV faculty, rising in 1968 to department chairman.

Dr. Dawson came to The Medical Society of Virginia through the Richmond Academy of Medicine. He belonged also to the American Congress of Physical Medicine and Rehabilitation and American Academy of Physical Medicine, and was a fellow of the American College of Physicians.

## Memoir of R. S. Owens 1910-1985

*By Hugh H. Trout, Jr., MD, and  
W. Conrad Stone, MD*

It is with regret that we report the death on March 3 of Dr. Richard S. Owens.

Dr. Owens was a graduate of Jefferson High School, University of Richmond, University of Maryland Medical School. He started his Roanoke practice in 1942. He was a member of the American Medical Association, Roanoke Academy of Medicine, The Medical Society of Virginia and the Medical Academy of Ophthalmology and Otolaryngology. He was on the staff of Community Hospital

of the Roanoke Valley and Roanoke Memorial Hospital.

Surviving are his wife, Katherine Norris Owens; son, Richard S. Owens, III, Wilmington, North Carolina; a daughter, Mary Owens Daitz, Albuquerque, New Mexico; and four grandchildren.

Dick Owens was characterized by a life of giving. He gave to his family, his friends and his patients, and they will sadly miss him. The world is a better place because of his life.

## Memoir of D. B. Cole 1892-1984

*By L. James Buis, MD,  
J. L. Thornton, MD, and Allen Pepple, MD*

Dean Baldwin Cole, who died on July 11, 1984, was born near the town of Chilhowie, Smyth County, in Southwest Virginia. When asked the location of Chilhowie, his stock answer, given with a grin, was "between Glade Springs and Seven Mile Ford."

He completed his undergraduate studies at the University of Richmond, where he was a first-string member of the varsity football team. His graduation from the Medical College of Virginia in 1917 was followed by service in the Medical Corps in World War I and internship at Bellevue Hospital.

He was married to Miss Ellen Garland in 1920 and was the proud father of two daughters, Kitty (Mrs. Harry Trautman of Manhasset, New York) and Betsy (Mrs. Brad Beverly of Richmond). Among his favorite activities were horseback riding and bird hunting.

Dr. Cole was in private practice, specializing in pulmonary disease, from 1923 until his retirement in 1977. Following World War II he was one of several physicians enlisted by General Omar Bradley to supervise the reorganization of the Veterans Administration medical service. While one of the founders and a charter member of the American College of Chest Physicians, he probably received the most satisfaction in being one of the few internists selected for membership in the prestigious Society of Thoracic Surgery. Dr. Cole was one of the early and enthusiastic advocates of collapse therapy for tuberculosis and was an authority on the treatment of thoracic empyema.

Dr. Cole was at his best in clinical medicine and in the personal approach to his patients. He had a special knack of circumventing extraneous matters and going directly to the crux of the problem.

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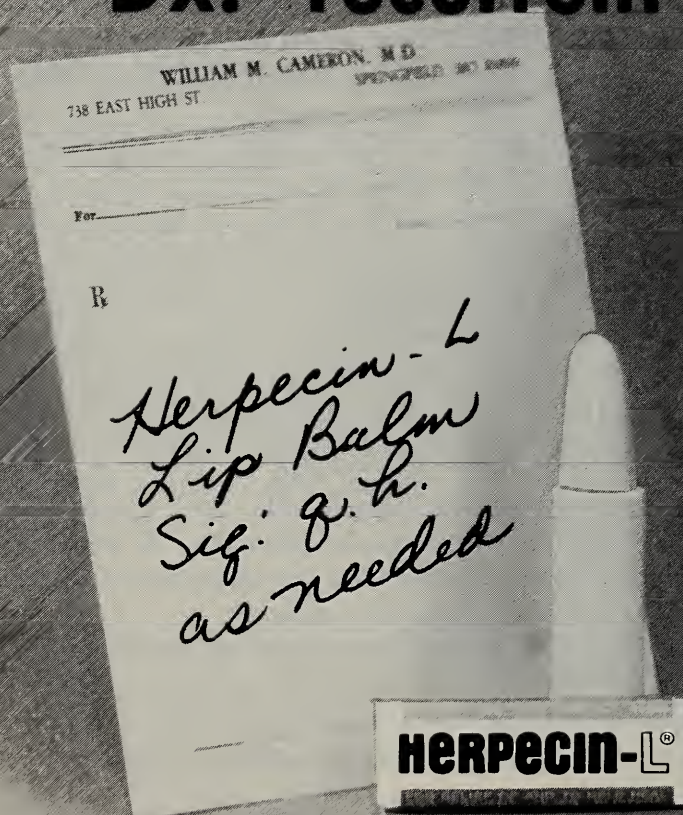
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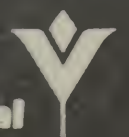
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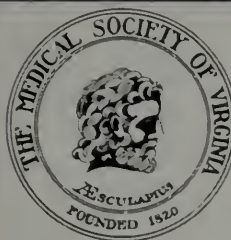
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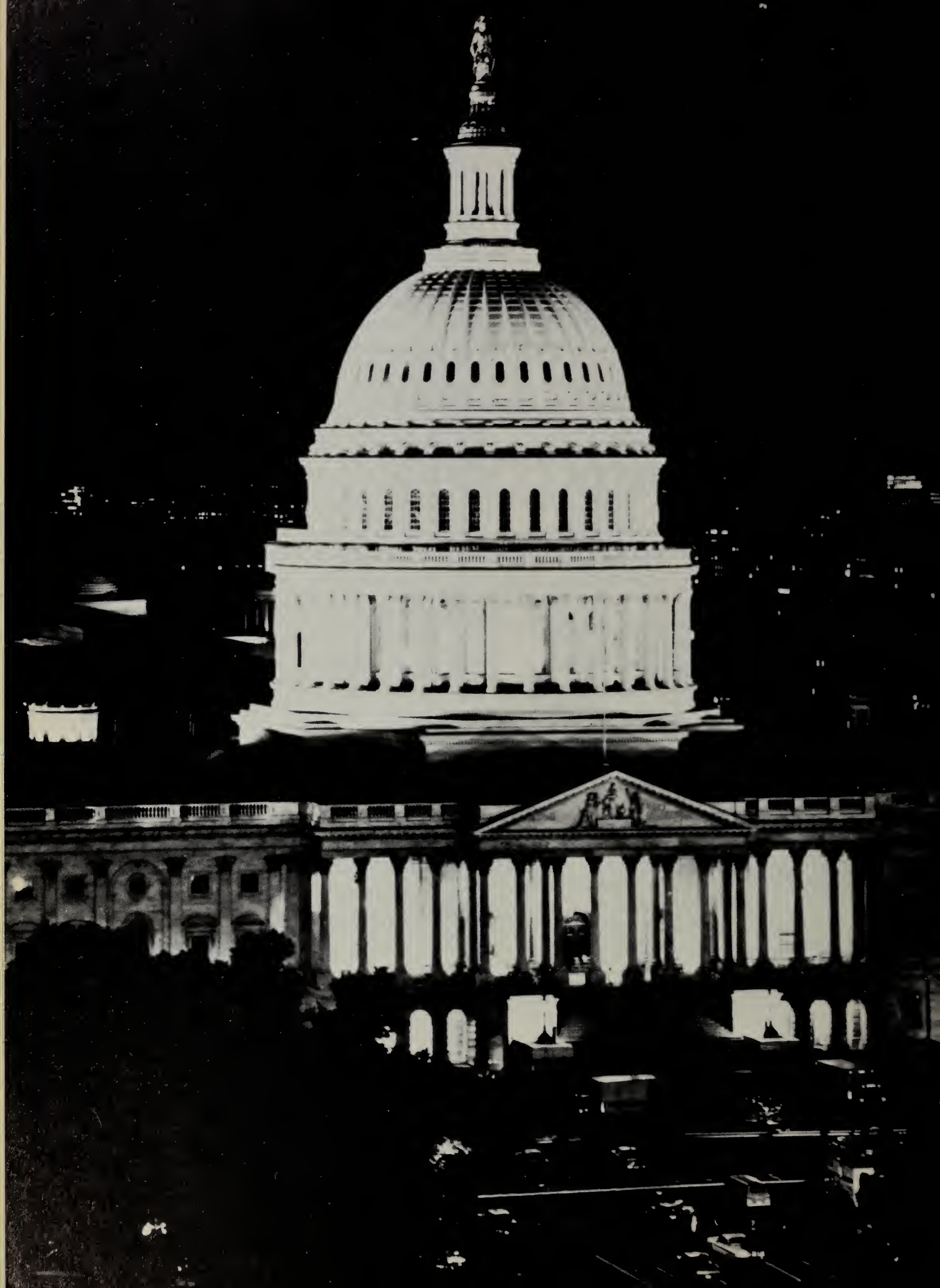
## Coming next issue:

**Unified membership.**  
 The Council has proposed it.  
 The House is going to vote on it.  
 What is unified membership?  
 Why adopt it?  
 Six MSV members will speak  
 to those questions—and more—  
 in Va Med's August issue.



# The Medical Society of Virginia

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# Congressmen and Councilors

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**L**EADERS of The Medical Society of Virginia travelled to Washington in May for an annual springtime rite: the renewal of ties with the twelve men who represent Virginia on Capitol Hill. The main event was luncheon in the Mike Mansfield Room on the House of Representatives side of the Capitol Building. All but one of the legislators came, and as they arrived VIRGINIA MEDICAL's photographer took the pictures on this and the following pages. Of the ten Medical Society of Virginia councilors, nine were on hand (Dr. Frederick K. McCune had undergone surgery the day before); they were asked to pose with the congressmen from their districts, while the two senators were photographed at the head table with the presiding officer, President Harry C. Kuykendall. The accompanying thumbnail bios turn this portfolio of pictures into a guide to both the congressmen elected to legislate for Virginian citizens and the councilors elected to legislate for Medical Society of Virginia members.

There was good-natured raillery after lunch as the councilors introduced the congressmen. During President Kuykendall's address, however, an intent stillness grew in the room; then, as he concluded, came sustained applause, and Senator John Warner rose to praise the President's message and ask for a typescript of it for the *Congressional Record*. VIRGINIA MEDICAL gives you the opportunity to read the speech on pages 418-419 of this issue. Don't miss it.

For the listening physicians, Dr. Kuykendall's words were a restorative. In the morning they had gone to the Department of Health and Human Resources for a briefing, and it had been, as one councilor glumly put it, "mostly bad news." The speaker was Richard P. Teske, associate administrator for external affairs for the Health Care Financing Administration, who started off with a hot topic, physician reimbursement for Medicare. "It's ready for change," Teske stated. "Outlays for physician services grew from \$8.5 billion to \$61.8 billion between 1965 and 1983, with a 20.4% increase each year during the 1980-1983.

He described three categories of "reform options":

- "Use Medicare's great bargaining power to nego-

tiate prices and promote price competition--and this should become easier as the physician glut grows."

- "Foster a variety of approaches that 'bundle' physician services and payments." Bundling, he said, forces physicians to practice more cost-effective care. An example of bundling: setting the payment unit as an entire episode of illness. He pointed out that payments can be bundled through an HMO, which packages physician and hospital services into a single payment, or through fixed-rate preferred provider plans. Or, to make the package concept broader, he continued, the HCFA is looking at "a geographic capitation system in which Medicare would buy the standard benefit package for a fixed sum from an insurance carrier in an area." Geographic capitation, he emphasized, involves all Medicare beneficiaries in a defined area without an enrollment process. Not only physician services but Medicare Parts A and B might be capitated, he said, in a "global bundling system" which "reduces the incentive to game the system and gives us more control over program outlays."

- "Try to limit total outlays for physician services to a target sum, through physician DRGs or by substituting a relative value scale for UCRs."

Several aspects of DRGs are slated for study, Teske noted, including urban-rural payment differentials; how to handle the cost of uncompensated care; how to incorporate institutions presently exempted; what to do about medical education costs. "In the long run," he forecast, "the DRGs will lead us to a more competitive, innovative health care system."

Teske's "final thought" to the visiting physicians, was this: "Until recently, those who provided health care in America were guided by a single standard: Deliver the best you have to offer and never mind the expense. That approach has given us the best care in the world."

—A.G.

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Photograph of the Capitol Building courtesy the Washington Convention/Visitors Association; of Dr. Owen by Dick Slease; of Congressman Slaughter courtesy the Richmond Times-Dispatch. All other photos in this section by William Collins Auth.



Congressman Bateman (left), Dr. Burton

#### FIRST DISTRICT

Rep. Herbert H. Bateman, Newport News, 56, Republican, lawyer, is in the first year of his second term after serving 14 years in Virginia's Senate. On the House Armed Services and Merchant Marine/Fisheries Committees he has built a record of conservative representation of his district's interests. Congressman Bateman's office address is 1518 Longworth Building, Washington DC 20515.

Councilor William S. Burton, MD, Nassawadox, 54, internal medicine, practiced solo for 12 years, with a group for another 12, then two years ago was retired by coronary artery problems. For The Medical Society of Virginia Dr. Burton serves on the Insurance Committee, is special advisor to the Finance Committee, and is in his sixth year on the Council. He is a past president of the Northampton-Accomack Memorial Hospital medical staff and the Northampton Medical Society. His address is PO Box 201, Nassawadox VA 23413.



Dr. Evett (left), Congressman Whitehurst

#### SECOND DISTRICT

Rep. G. William Whitehurst, Norfolk, 60, Republican, college professor and administrator, was first elected to the House of Representatives in 1969. As a member of the House Armed Services Committee and the senior Republican on its military readiness subcommittee, Congressman Whitehurst is known for his conservatism and his unwavering advocacy of a stronger military. His office address is 2469 Rayburn Building, Washington DC 20515.

Vice Councilor Russell D. Evett, Norfolk, 53, internist in group practice, has been an MSV vice president and is now chairman of the Medicine/Business Coalition, a member of the Public Relations Committee and the ad hoc panel studying disciplinary regulations, and an Associate Editor of VIRGINIA MEDICAL. He has been president of the Norfolk Academy of Medicine and the Virginia Gastroenterological Society. Dr. Evett's address is 530 Wainwright Building, Norfolk VA 23510.



Dr. Regan (left), Congressman Bliley

#### THIRD DISTRICT

Rep. Thomas J. Bliley, Jr., Richmond, 54, Republican, businessman, former mayor of Richmond, is in his third term in Congress. He is on the House Energy and Commerce Committee, where he has been involved in trade issues, tobacco industry regulation, the "superfund" cleanup program and health care legislation. He also sits on the District of Columbia Committee and on the Select Committee on Children, Youth and the Family. Congressman Bliley's office address is 213 Cannon Building, Washington DC 20515.

Councilor William W. Regan, MD, Richmond, 51, practices internal medicine/gastroenterology in a group. A first-term member of Council, he is a member also of the MSV Legislative Committee and for the Richmond Academy of Medicine has served on the Legislative and Patient Relations Committees. Now a vice president and trustee of the Academy, he has been president of the Richmond Society of Internal Medicine. Dr. Regan's address is 900 North Hamilton Street, Richmond VA 23221.

#### FOURTH DISTRICT

Rep. Norman Sisisky, Petersburg, 57, Democrat, businessman, won four terms in Virginia's House of Delegates and is now in his second term on Capitol Hill. He serves on the House Armed Services Committee, where he has supported a strong military program, and on the Small Business Committee and the Select Committee on Aging. As Democratic regional whip, he helps set legislative strategy. Congressman Sisisky's address is 426 Cannon Building, Washington DC 20515.

Councilor H. Alan Bigley, Jr., MD, Petersburg, 42, practicing urology in a partnership, is the youngest member of the Council. A VaMPAC trustee since 1978, he is VaMPAC's present treasurer and is a veteran member of the Legislative Committee. For the Southside Medical Society he was president in 1982; his wife, Garland, is now president of the Medical Society of Virginia Auxiliary. Dr. Bigley's address is 700 South Sycamore Street, Petersburg VA 23803.



Congressman Sisiky (left), Dr. Bigley

#### FIFTH DISTRICT

Rep. Dan Daniel, Danville, 71, Democrat, businessman, spent a decade in Virginia's House of Delegates before going to Washington in 1969. In both state and national settings, he has been a voice of conservatism. As a member of the House Armed Services Committee and chairman of its military readiness subcommittee, Congressman Daniel has advocated a strong military and tough-minded foreign relations policies. His office address is 2308 Rayburn Building, Washington DC 20515.

Councilor Glenn B. Updike, Jr., MD, Danville, 68, in the group practice of ob/gyn, is in his sixth year on the Council. For The Medical Society of Virginia he has done yeoman service in the legislative realm, as chairman for ten years of the Legislative Committee and as a member of the Vanguard Committee and the Medicine/Business Coalition. For the Danville-Pittsylvania Medical Society he has been secretary-treasurer. Dr. Updike's address is 150 West Main Street, Danville VA 24541.



Dr. Updike (left), Congressman Daniel

#### SIXTH DISTRICT

Rep. James R. Olin, Roanoke, 64, Democrat, is a retired vice president of the General Electric Corporation and thus is said to be the highest ranking former corporate executive serving in the House. In a district that historically has been a Republican stronghold, he has been so far a staunch supporter of national Democratic policies. He serves on the Agriculture and Small Business Committees. Congressman Olin's office address is 1207 Longworth Building, Washington DC 20515.

Councilor J. Hayden Hollingsworth, MD, Roanoke, 49, practices internal medicine/cardiology with a group. Before his election to the Council, he was chairman of the Vanguard Committee. Dr. Hollingsworth has been president of the Roanoke Academy of Medicine and of both the Roanoke Valley and Virginia Heart Associations. He is director of Roanoke Memorial Hospital's coronary care unit and a delegate to the AMA's Hospital Staff Section. His address is 1615 Franklin Road SW, Roanoke VA 24016.



Dr. Hollingsworth (left), Congressman Olin

## **“Rationing,” said the plain-spoken doctor, “is the bullet you’ll have to bite.”**

*This is the text of MSV President Harry C. Kuykendall's address on May 15 in Washington at the Congressional Luncheon given by the Society's leadership in honor of Virginia's senators and congressmen.*

**I** GOT a card in the mail several weeks ago which said on the front of it, “To someone who is outstanding in the field.” I was thrilled to get this because I thought, Well, finally someone has recognized my worth. I opened the card eagerly to see who thought so highly of me, but inside there was no signature, no message, no words at all, just the picture of a bull. The bull, of course, was standing out in the field.

That ended my brief delusion of fame, but you, our guests, are in fact just such persons. You have, by your presence, in the United States Congress reached the pinnacle of governance. You are members of the highest deliberative body of the most powerful nation on earth, and so you are indeed outstanding in your field. We congratulate you. We respect you. We salute you.

I am not accustomed, as I know all of you are, to being cited in the newspapers, but it happens I was cited some two to three weeks ago in the Washington Post, and in that article I was referred to as being a “plain-spoken doctor.” I want to be plain-spoken with you today.

You have tremendous power here to do good, and you have tremendous power to create mischief. I have no idea how you can possibly manage to deal with all the issues you are required to consider in a given year. In the 1983-1984 Congress you had some 12,200 bills to consider—12,200! I haven't the foggiest notion how you even begin to grapple with such a vast number of bills.

Some 2,000 of them were health-related bills--2,000 bills asking you to mend and patch and sew up the tattered and raggedy remnants of the fabric of American health care—that threadbare scrap, that

device for lining the pockets of physicians with gold!

**T**HERE are two things I want to say to you this afternoon. First, I would like to advise you of how much money I make. I think that is something you need to know. I think it's important.

If you allow for the hours I spend to make my money, and for the amount of money I would have to put into the bank every year over a period of 20 years in order to create sufficient money to retire on for the rest of my life—if you count those two things, and you should, then I make the same amount of money as a garbage collector in Manhattan! That is a fact.

Now I know that some doctors make more money than that. Some doctors make \$100,000-\$200,000 a year. I know of one doctor who makes \$500,000 a year. That's a lot of money. As a matter of fact, that's getting close to being half of the money that the 22-year-old Patrick Ewing, the Georgetown University basketball star, is going to make next year and every year thereafter for the foreseeable future, and that is obviously too much money for *any* physician to be making!

There are some doctors who I believe make more money than they should, but what I have told you about myself is typical of the overwhelming majority of American physicians. I do not say that to you as a complaint. I present it to you as a fact and as a point of reference, because I think it is important that you have that fact and that frame of reference when you, for example, are involved in debate on the floor of the Congress and you hear such comments as, Gentlemen, consider this as a vote for America's old people or a vote for rich doctors, or, All we want is for the doctors to do their fair share. Comments of this kind were made last year during the congressional debate on the Rostenkowski amendment regarding mandatory assignment of Medicare fees.

Gentlemen, I am already carrying *half* of your Medicare program on my back. You now pay me less than one-half of what you should pay me when I see a Medicare patient. I *am* doing my fair share.

America has the best medical care in the history of the world, the best on this planet, period! But it's expensive—and we understand the dilemma you are beginning to face. I am not at all sure that it is particularly unholy if a nation spends 10% of its gross national product on health care, or even 15% or 20%, for that matter. We spend more than that on whiskey and cigarettes, and more yet on entertainment. But fortunately, you don't have to legislate that one; I am sure the market place will sort that out eventually one way or another. What you *do* have to legislate, however, is the money the federal government spends on health care, the \$40 billion that it spends for the aged, the indigent, the disabled, for end-stage renal disease, for Title XIX patients and so on, *because you have decided that the cost of that medical care is "too much"* and that those costs are rising too fast.

**A**ND that brings me to the second and more substantive thing I want to say to you today is that so far—*so far*—you have been trying to legislate in the wrong direction. You have been dancing all around the nitty-gritty of holding down federal expenditures in health because I believe—I believe—you may not quite know what the problem is.

You've done PSROs and you've done PROs. You've done DRGs and fee-freezes and caps and percentages. And you've saved a nickel here and a dime there and a quarter over there. But, gentlemen, *I am not the problem. The medical profession is not the problem. Hospitals are not the problem.*

Computed tomography scanners are the problem. Resonant magnetic imaging is the problem. Spinal cord anastomosis, microsurgery, life-support systems, kidney dialysis are the problem. Exploding

scientific and technological advances are the problem.

Well, suppose that's true. How can you fix that? If that's the problem, and *if* health care for federal patients is rising too high, what can you do about it? I think you can do something about it, and I think you even have a choice.

One way would be simply to legislate an end to science and technology. Pass a few laws and shut it all down—stop it, put an end to it, make it illegal. And then I suspect you would see that the rising costs of care for federal patients would no longer be accelerating out of sight.

Now that may be very difficult to do. That may be "impolitic." Or it may even be impossible.

So I believe you are going to have to get involved with the other alternative. I believe you are going to have to get involved, sooner or later, with rationing. I believe you are going to have to begin to decide how much care who can have. You are going to have to begin to decide how much is enough and how much is too much, to decide what is and what is not cost-effective. *I believe you are going to have to begin to decide whom it is you wish to live and whom it is you wish to die.* And then you will have to create the statutes to carry it out.

That's the bullet you are going to have to bite sooner or later. Nothing else and nothing less will make any difference at all.

We thank you for agreeing with us in the past that our profession and our system of health care are worth saving, and we thank you for helping us to do just that. We hope and beseech that you will continue to be extremely careful not to tear completely apart the very fabric of the health care system you are so frequently asked to try to repair.

We thank you for your dedication and we wish you well in the days and months ahead.

HARRY C. KUYKENDALL, MD. President,  
The Medical Society of Virginia



▲Congressman Slaughter

◀Dr. Owen

#### SEVENTH DISTRICT

Rep. D. French Slaughter, Jr., Culpeper, 60, lawyer, was not at the Congressional Luncheon; hence these pictures. He was elected last year to take the seat vacated by J. Kenneth Robinson, who retired. Slaughter himself retired from the Virginia legislature in 1977 after 20 years as a delegate. On the Hill, he was assigned to the House Science/Technology and Small Business Committees. Congressman Slaughter's address is 319 Cannon Building, Washington DC 20515.

Councilor John A. Owen, Jr., MD, Charlottesville, 60, is an internist specializing in diabetes at the University of Virginia. His MSV appointments include the Scholarship, Ethics, Physicians Health/Effectiveness, and Redistricting Committees. Now an Associate Editor of *VIRGINIA MEDICAL*, Dr. Owen has been Editor-in-Chief of *Hospital Formulary* and is a past president of the United States Pharmacopeia and the Virginia Diabetes Association. His address is Box 242, University of Virginia Medical Center, Charlottesville VA 22908.

#### EIGHTH DISTRICT

Rep. Stanford E. Parris, Fairfax, 55, Republican, lawyer and businessman, served three terms in Virginia's House of Delegates and was Secretary of the Commonwealth under Gov. John N. Dalton. Elected to Congress in 1972, he lost a bid for reelection but returned in 1980 and twice beat the Democrat who had defeated him. He is on the Banking and District of Columbia Committees and the Select Committee on Narcotics. Congressman Parris' address is 230 Cannon Building, Washington DC 25015.

Councilor Nicholas G. Colletti, MD, Woodbridge, 49, family physician in solo practice, has served on The Medical Society of Virginia's Membership Committee and is in his third term on the Council. He has twice been president of the Prince William Medical Society and was instrumental in the founding in 1972 of Potomac Hospital, serving as a charter member of its board and the first president of its medical staff. Dr. Colletti's address is 14904 Jefferson Davis Highway, Woodbridge VA 22191.

#### NINTH DISTRICT

Rep. Frederick C. Boucher, Abingdon, 38, Democrat, lawyer and former Virginia state senator, is in his second term as an energetic representative from the "Fighting Ninth," where the seat was held for many years by a Republican. He is a member of the Education/Labor, Science/Technology, and Judiciary Committees and the Select Committee on Aging. Congressman Boucher's address is 1723 Longworth Building, Washington DC 25015.

Councilor J. Thomas Hulvey, Abingdon, 49, orthopedic surgeon practicing with a group, is chairman of The Medical Society of Virginia's Membership Committee and a member of the Legislative, Vanguard and Sports Medicine Committees. The Southwest Medical Society selected him as its president this year, and the National Federation of Football Coaches honored him with an award for his work with young athletes. Dr. Hulvey's address is 300 East Valley Street, Abingdon VA 24210.



Dr. Colletti (left), Congressman Parris



Congressman Boucher (left), Dr. Hulvey

**TENTH DISTRICT**

Rep. Frank R. Wolf, Vienna, 56, Republican, lawyer, former assistant to the Secretary of the Interior and Deputy Assistant Secretary for Congressional and Legislative Affairs, won his House seat in 1980 by defeating a longtime Democratic member of Congress. He serves on the Appropriations Committee and the Select Committee on Children, Youth and Families. Congressman Wolf's address is 130 Cannon Building, Washington DC 20515.

Councilor Leon I. Block, MD, Falls Church, 53, plastic surgeon in solo practice, has served on The Medical Society of Virginia's Membership and Legislative Committees and the Medicine/Business Coalition. He has been president of the Fairfax Medical Society and the Metropolitan DC and Virginia Societies of Plastic Surgeons. For the American Society of Plastic and Reconstructive Surgeons, he is chairman of its Government Relations Committee. Dr. Block's address is 2946 Sleepy Hollow Road, Falls Church VA 22044.



Congressman Wolf (left), Dr. Block



From left, Senator Tribble, Dr. Kuykendall, Senator Warner

Sen. Paul S. Tribble, Jr., Hampton, 38, lawyer, was an assistant US attorney for Alexandria and Commonwealth attorney for Essex County before going to Washington, where he has served three terms in the House and is now in his third year in the Senate. As a first district congressman he sat on the House Armed Services Committee; in the Senate, he is a member of the Foreign Relations, Commerce and Small Business Committees. Senator Tribble's address is 517 Hart Building, Washington DC 20515.

President Harry C. Kuykendall, MD, Alexandria, 52, family physician in solo practice, began his Medical Society of Virginia service as a delegate, became chairman of the PSRO Liaison, Vanguard and Program Committees, put in two terms as a councilor

and served as a vice president before entering the MSV presidency. He has been president of the Alexandria Medical Society, the Northern Virginia Academy of Family Physicians, the Northern Virginia Foundation for Medical Care, and the Alexandria Chapter of the American Cancer Society. His address is 4921 Seminary Road, Alexandria VA 22311.

Sen. John W. Warner, 57, Republican, lawyer, gentleman farmer in Fau-

quier County, was first elected a senator in 1978 after serving as American Bicentennial administrator and Secretary of the Navy. He was reelected last fall and is Virginia's senior senator. Much of his attention is given to the Senate Armed Services Committee; he is chairman of its strategic and theater nuclear forces subcommittee. He also serves on the Energy Committee. Senator Warner's office address is 421 Russell Building, Washington DC 20515.

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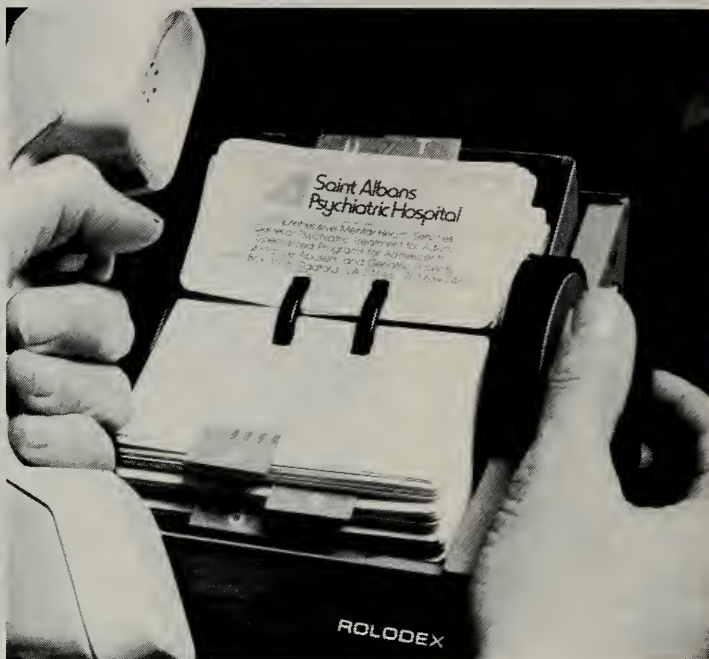
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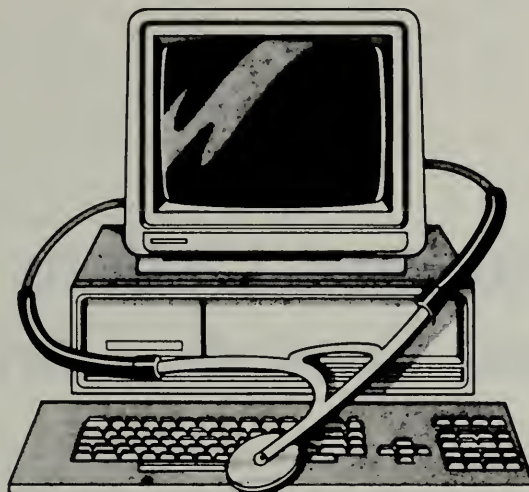
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nence usually occurs in from less than 2%-10%.<sup>7-9</sup> Other rare complications include rectal injury with a prostates-rectal fistula, bladder neck contracture, urethral stricture, hemorrhage, wound infections or abscesses. The local recurrence rates for B lesions (T2) recently reported ranged from 6%-22%.<sup>10</sup>

The 10- and 15-year survival statistics for patients undergoing radical prostatectomy range from 41%-72% and from 10%-51% respectively.<sup>11-18</sup> These reported survival rates are for Stage B (T2) tumors; however, absolute comparisons are difficult because some series are based on clinical staging and others on pathological staging. It should be emphasized that 15%-20% of prostatic carcinomas are clinical B's (T2) on initial evaluation. Likewise, as emphasized by Elder and associates,<sup>19</sup> only 33% of clinical B2 (T2b) lesions are pathological B2 lesions. In their series, 66% of the patients had histologic extension beyond the confines of the prostate manifested by either lymph node metastases or extension of disease through the capsule. For this reason the Johns Hopkins group primarily recommends radical prostatectomy only for B1 (T2a) lesions.

Radical prostatectomy has been employed for patients with A2 (T1b) carcinoma; however, there are no reports on 15-year results. It should be realized that the majority of A2 tumors are less differentiated and have a more virulent biologic potential as manifested by the high incidence of pelvic node involvement. Golimbu and associates<sup>20</sup> reported that 68% of tumors were moderately to poorly differentiated and 37.5% were associated with disease in the pelvic nodes. Corriere and associates<sup>21</sup> reported that 60% of 47 patients with A2 disease treated by radical prostatectomy developed recurrent disease. Although it remains a controversial point, radical prostatectomy after extensive transurethral resection may be more difficult technically, with a higher complication rate.

Radical prostatectomy for Stage C (T3,T4) has been performed with 15-year survivals of up to 20%.<sup>22,23</sup> The majority of these patients were carefully selected and not only had small well-differentiated lesions but most were treated with adjuvant endocrine therapy, which certainly clouds the issue on length of survival. Most urologists do not favor radical surgery for advanced localized disease and utilize one of the forms of radiation.

### **Radiation Therapy**

The major stimulus for the current popularity of external beam therapy comes from the development of megavoltage teletherapy that allows delivery of 6,000-7,000 rad to the prostate without prohibitive

morbidity. Reports by Budhraj and Anderson,<sup>24</sup> Del Regato,<sup>25</sup> George and associates,<sup>26</sup> and Bagshaw and associates<sup>27</sup> have confirmed its effectiveness. The standard for comparison and the most extensive survival data is that of Bagshaw at Stanford University. In 1984 he reported on 458 patients with extracapsular extension (C or T3). The 5-, 10- and 15-year results for the Stage B patients are 80%, 59% and 37% and for the Stage C patients 60%, 36% and 22% respectively.<sup>28</sup> The most important factor affecting prognosis in these patients was the presence of lymph node metastases. Ninety per cent of the patients without nodal disease survived nine years.<sup>29</sup> Other important prognostic factors include extent of anatomic involvement, histologic pattern or grade, and the presence of urethral obstruction.

The complications of external beam megavoltage therapy include diarrhea, rectal urgency, dysuria and urinary frequency during therapy. Few of these symptoms, however, are lasting or permanent. Impotence occurs in 13%-40%, and the last complications of incontinence, chronic cystitis and chronic proctitis occur as often as 7%, 8% and 4% respectively.<sup>30</sup> With extended field therapy (including the whole pelvis), serious bowel complications have occurred in 67% of the patients in the Stanford series, and genital edema is common, occurring as often as 55%.<sup>31</sup> Because of these problems, extraperitoneal lymphadenectomy has largely been abandoned. The local recurrence rates for external beam therapy have likewise been recently reviewed by Schellhammer and Robey and for Stage B disease range from 3%-16% and for Stage C, 0%-34%.<sup>10</sup> The issue of positive biopsies following radiation therapy continues to raise controversy. The positive biopsy rates from Bagshaw's series for small B, large B and for C lesions are 38%, 59% and 74% respectively.<sup>28</sup> Although the presence of a "positive" biopsy may portend a worse prognosis, the ultimate effect on survival remains undetermined.

Although controversy exists over the total dose of radiation needed as well as the field to be treated, there is no doubt that this therapy is effective in curing some prostatic cancers. The biggest advantage to external beam therapy are that it is applicable for all local stages of disease and it is more readily available than interstitial techniques, which require special expertise on the part of the urologist and radiotherapist.

### **Interstitial Irradiation**

The modern era of interstitial irradiation began in the 1970s with the introduction of encapsulated radiation sources. Interstitial irradiation in general

has several advantages when compared to external beam irradiation or radical surgery. The implant dose may be accurately adapted to the size and shape of the tumor, the higher cumulative radiation dose is delivered continuously over the useful life of the isotope, the hypoxic tumor center receives a larger dose than the oxygenated periphery, there is less damage to normal tissues as they receive less irradiation, staging and treatment are combined in a single procedure, and the procedure is applicable to a larger patient population than those patients considered candidates for radical surgery. The disadvantages of interstitial irradiation are that a surgical procedure is required, large extracapsular tumors with ill-defined margins may not be adequately treated and some prostatic carcinomas may not be radioresponsive.

There are three isotopes used for implantation today: iodine<sup>125</sup>, gold<sup>198</sup> and iridium<sup>192</sup>. Each has its own radiobiologic characteristics, advantages, disadvantages and specific technique of implantation. Candidates for prostatic implantation vary with the specific isotope and technique of implantation used. In general, all patients with localized disease can be treated with one of the isotopes or implantation techniques. Iodine<sup>125</sup> is limited to those patients with B or small C lesions (T2,T3a) with no significant obstructive symptoms and no peri-urethral tumor. Larger local tumors and patients post-transurethral-resection do not allow accurate and effective seed distribution and permit the possible inadvertent loss of seeds because of a small amount of implantable tissue post-resection. As a result, certain areas of the tumor may not be adequately irradiated. For the most part gold<sup>198</sup> is used under the same circumstances as iodine<sup>125</sup>; however, selected patients post-transurethral-resection may be implanted. These patients would include some A-2's (T1b) and selected C's (T3a & b). The iridium<sup>192</sup> technique is more universally applicable and includes nearly all localized disease because of the use of a template and the fact that the implanted irradiation is temporary. The only patients excluded would be A2's, with minimal prostatic tissue remaining post-transurethral-resection.

The complications from the first 300 cases of bilateral pelvic lymphadenectomy and iodine<sup>125</sup> implantation reported from Memorial Hospital have been fully analyzed.<sup>32</sup> The operative mortality was .67%, with an intraoperative complication rate of 6% and postoperative complication rate of 23%. Cardiovascular complications, including pulmonary emboli, thrombophlebitis and lower extremity edema, occurred in 7%. Other pelvic complications,

which occurred in about 10%, included lymphocele formation (4.7%), hematoma, abscess and pelvic cellulitis. With the use of the modified node dissection beginning in 1978, lower extremity and genital edema has been virtually non-existent.<sup>33</sup> Some degree of irritative urinary symptoms occur in about 25% of the patients, but these are usually mild and last at most only a few weeks. Significant rectal symptoms are also uncommon. Occasionally a patient may have a small amount of bleeding secondary to localized radiation proctitis. This problem responds well to conservative therapy and the use of steroids. The devastating complication of rectourethral fistula has been reported;<sup>34</sup> however, this complication has not been seen in the Memorial Hospital experience. Although the exact cause of the problem may not be determined, underlying factors include technical expertise in seed placement, use of too many seeds with too high energy, inaccurate dosimetry calculations, and the inappropriate use of additional external beam therapy. Finally, sexual potency is preserved in greater than 90% of patients treated.<sup>35</sup>

The most recent results of iodine<sup>125</sup> therapy have been reported by Herr in 1983 on 586 patients treated at Memorial Hospital.<sup>33</sup> The observed 5-year survival for patients with B1 lesions was 95% (79% disease free); for B2 lesions, 81% (53% disease free); for C lesions (T3), 71% (45% disease free), and for large C lesions (T4), 21% (19% disease free). The overall survival at 5 years was 84% and at 10 years 68%. The impact of positive pelvic nodes on absolute survival in this group of patients was dramatic, with 83% of the patients with negative nodes alive at nine years compared to 55% of patients with positive nodes. The results of gold<sup>198</sup> implantation are similar.<sup>36</sup> Five- and 10-year survival for patients with B-1 lesions was 100% and 84% respectively (71% and 54% disease free), for B2 lesions 81% and 52% (59% and 20% disease free), and for C1 lesions 86% and 73% (46% and 40% disease free). The overall survival at 5 years was 90% and at 10 years was 68%. As with the iodine<sup>125</sup> data survival with negative lymph nodes was much better at 5 and 10 years than with positive lymph nodes (74% versus 32% at 5 years and 53% versus 18% at 10 years).<sup>37</sup> Since the template technique with iridium<sup>192</sup> is relatively new; no 5-year followup data is available as yet.

The effectiveness of radiotherapy, whether it be external beam or interstitial, may be challenged by the findings of persistent tumor on biopsy performed 6-36 months post treatment. Data reported by Scardino<sup>38</sup> following gold<sup>198</sup> revealed an overall

38% positive biopsy rate. As the stage of disease increased so did the positive biopsy rate. Those with negative biopsies had a 4% local recurrence rate and those with positive biopsies had a 37% local recurrence rate. Although it seems that the persistence of tumor after irradiation is a poor prognostic sign, radiation therapy is certainly curative in a number of individuals.

### Summary

Prostate cancer is a heterogeneous disease in which a well-differentiated tumor confined to the gland may be slow growing, have a low propensity for metastasizing, and carry an excellent possibility of control by any treatment modality; or it may be a high-grade lesion that may have undetectable early metastases (present at the time of treatment) and be radioresistant. Given this inherent heterogeneity and the fact that some tumors are radiosensitive and others are not, it seems likely that individuals would be better treated with either radical surgery, external beam therapy or interstitial therapy. Controversy and investigation should not center around which treatment option is best, surgery or radiation, but should be concerned with determining which tumors might be radioresponsive and which method of treatment is best suited to produce the longest disease-free status while allowing the optimal quality of life in an individual patient.

In general, radical prostatectomy is reserved for the patient with a B1 (T2a) lesion; however, it may be an acceptable procedure for patients having pathological B2 (T2b) lesions and some selected patients with A2 (T1b) lesions. External beam therapy with a modern linear accelerator is applicable for any patient with disease confined to the prostate (less than D or No, Mo). At least one of the three methods of interstitial implantations is applicable to all stages of localized prostate cancer with one exception: Patients with A2 (Tb) lesions who have had a definitive transurethral resection where less than 1.5 cm of prostatic substance remains do not have enough tissue to support an adequate radiation dose by implantation and are better treated by external beam or possibly radical prostatectomy.

Finally, since overall survival is not significantly different for any of these therapies, no categorical recommendation should be made regarding one form of treatment. The ideal method of choosing the form of therapy is based on the understanding of the morbidity and complications of the procedure and the personal preference and experience of the treating physician.

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## VIRGINIA AUTHORS

**Acute Leukemia in Adults: Cost Effectiveness of Treatment.** Lucie Leavell Vogel, MS; Oscar A. Thorup, Jr., MD; Donald L. Kaiser, DPH; John W. Zirkle, MD; John F. Harlan, BA, and Charles E. Hess, MD, *Charlottesville*.

Costs of treating 174 adult patients with acute leukemia were compiled and analyzed over the five-year period 1974 to 1979. The average overall cost per patient was \$18,760, and increased over the period of study. Increased total hospital costs were incurred by patients who achieved a favorable response to induction chemotherapy and by those with a diagnosis of acute lymphocytic leukemia (ALL). To assess the impact of successful treatment on hospital expenditures, total months of survival were compared with total hospital costs to determine cost per month of life. Using this analysis, improved survival, favorable response to chemotherapy, and a diagnosis of ALL were associated with significant decreases in cost per month of life. The long-term survivors (alive  $\geq 2$  years from diagnosis) best demonstrated this effect, with a mean hospital cost per month of survival from diagnosis of \$563, which was significantly less than \$6,937 for those who achieved a partial remission, \$10,703 for those with treatment failure, and \$8,240 for those who were untreated. These costs linked to outcome are comparable to those reported in other disorders that require prolonged and intensive hospital care. With the progressive improvement in response rate and in percentage of long-term survivors that is being observed in adults with acute leukemia, these costs should continue to decrease. *South Med J* 1984; 77:51-55

**Endotracheal Administration of Emergency Medications.** Robert D. Powers, MD, and Leigh G. Donowitz, MD, *Charlottesville*.

When vascular access is delayed or unreliable in emergency situations, an endotracheal tube provides a rapid and reliable route for administration of medication. Epinephrine, lidocaine and atropine have shown clinical efficacy when given by the endotracheal route. There is evidence that other medications including naloxone and diazepam may also be suitable for endotracheal use, but clear-cut recommendations await further studies of pharmacokinetics and toxicity. *South Med J* 77:340-341, 1984

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# The Rising Cost of Recruiting Interns

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The cost of recruiting interns for a major teaching hospital in Virginia continues to increase, an ongoing study reveals, with inflation the major contributing factor. The authors reiterate their advocacy of controlling these costs by limiting the number of programs to which potential interns may apply.

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**I**N a previous study,<sup>1</sup> we estimated the cost of recruiting interns for the University of Virginia Medical Center and nationwide, and offered suggestions for controlling those costs. Here we describe the results of those efforts and the effect of inflation on those efforts during the period between 1978 and 1984.

## Methods

The methods and assumptions in this study were the same as previously described. The direct cost to the hospital of supplies and services was provided by the Office of Graduate Medical Education of the Medical Center. The indirect cost in house officer time, one hour per candidate, was an estimate from the same source.

The direct cost to the departments was estimated as the yearly cost, including salary and benefits, for the services of one "middle grade" secretary. The indirect departmental cost was the time faculty spent administering the selection process, and inter-

viewing and reviewing candidates. The estimates of time are based on a review of the recruiting practices of the departments. We have assumed that each of the nine departments has one administrator who spends an average of 30 minutes per day in recruiting activities for 80 days September through December, applicants have two 30-minute interviews, and ranking of candidates requires eight hours from each of five faculty members per department.

A total of 18 interns were selected for the pediatric training program in 1983 and 1984 (1984 group), as compared to 16 interns selected in 1977 and 1978 (1978 group). Each group received identical questionnaires to determine the number of programs to which they applied and the cost to them of seeking a first-year position.

The estimated cost to the applicants' medical schools was limited to processing the letters of recommendation. The average number of pages in the dean's letter and the average number of letters of recommendation and their length were determined by reviewing the folders of 20 applicants to the pediatric program in both 1978 and 1984. The cost of producing a business letter was provided by the Dartnell Corporation.<sup>2</sup>

Total inflation for the period between 1978 and 1984 was estimated to be 64%.<sup>3</sup>

## Results

The number of applications for internship positions at the University of Virginia Medical Center increased by 38% between 1978 and 1984, while the number of applicants who were granted interviews declined during the same period by 33% (Table 1). Sixty-three applicants were accepted for internship via the National Resident Matching Program (NRMP) in 1978, whereas 73 were accepted in 1984, an increase of 16%.

The costs to the hospital and medical school departments for 1978 and 1984 are categorized in Table 2. Direct hospital costs for materials, services, and personnel increased 108% between 1978 and 1984, and outstripped the rate of inflation (64%) for the same period. NRMP cost to the hospital, adjusted for inflation, declined during the period of study. Likewise, indirect costs to the hospital for house officer time showed a dramatic decrease when adjusted for inflation between 1978 and 1984. Indirect costs in house officer time were based on an arbitrary figure of 40 hours worked per week and the salary and benefits of a second year resident, resulting in wages of \$7.30 per hour in 1978 and \$10.46 per hour in 1984. This represents an increase

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of only 43%. Thus, the decrease in indirect cost to the hospital between 1978 and 1984 is due to a decline in the number of applicants interviewed and the failure of house officers' salaries to keep pace with inflation.

Overall, total hospital costs increased by 78% over the period of study, but when adjusted for inflation, the costs increased by only eight %.

Direct costs to the medical school departments in the form of secretarial salaries and benefits increased at a rate approximating the rate of inflation between 1978 and 1984. Indirect costs to the medical school departments showed a 19% decline when adjusted for inflation during this period. Faculty time devoted to recruitment declined from 1,676 hours in 1978 to 1,357 hours in 1984. Indirect costs in faculty time were based on an arbitrary figure of 40 hours worked per week, an average \$40,000 salary and 12% in benefits in 1978, and an average \$60,000 salary plus 25% in benefits in 1984, result-

ing in wages of \$22 per hour in 1978 and \$36 per hour in 1984. This represents an increase of 64%.

Thus the modest decline in departmental costs between 1978 and 1984 was due to the decrease in the number of applicants interviewed.

The costs to interns who accepted positions in the pediatric program in the 1978 group and the 1984 group are compared in Table 3. Candidates interviewed at a mean number of seven programs in 1978 were compared to a mean of ten programs in 1984.

**Table 1. Comparison of Applications for All Internship Positions at the University of Virginia Medical Center 1978 and 1984.**

	1978	1984	Increase/ (Decrease)	
			Number	Percent
No. applications requested	3,241	4,481	1,240	38%
No. returned	1,713	1,632	( 81)	( 5%)
No. applicants interviewed	956	637	(319)	(33%)
No. matching	63	73	10	16%

**Table 2. Comparison of the Costs of Recruiting Interns at the University of Virginia Medical Center 1978 and 1984.**

	1978	1984	Dollars	Increase/(Decrease)	
				Percent	Adjusted for Inflation <sup>3</sup>
Hospital Costs					
Materials and services	\$19,786	\$41,097	\$21,311	108%	26%
Personnel	19,201	34,560	15,359	80%	9%
NRMP cost <sup>1</sup>	733	965	232	32%	(20%)
House officer time <sup>2</sup>	6,979	6,663	(316)	(5%)	(42%)
	\$46,699	\$83,285	\$36,586	78%	8%
Department Costs					
Faculty time <sup>2</sup>	\$36,872	\$48,852	\$11,980	32%	(19%)
Secretarial cost	9,005	14,557	5,552	62%	( 2%)
Total	\$45,877	\$63,409	\$17,532	38%	(16%)
Grand Total	\$92,576	\$146,694	\$54,118	58%	( 4%)

1. National Resident Matching Program.

2. Indirect Costs.

3. Cumulative inflation rate between 1977 and 1983 equals 64%.

**Table 3. Comparison of Estimated Training Program Selection Cost to Pediatric Intern Applicants 1978 and 1984.**

	1978 (16 applicants)			1984 (18 applicants)		
	Mean	Range	Total	Mean	Range	Total
Applications made	8	(3-17)	132	13	(5-20)	235
Programs interviewed	7	(4-11)	115	10	(5-15)	188
Days spent in travel and interviews	12	(5-18)	185	17	(10-30)	303
Cost of transcripts	\$5	(\$0-\$20)	\$72	\$4	(\$0-40)	\$80
Letters and postage	\$6	(\$0-\$30)	\$95	\$10	(\$2-\$25)	\$187
Air travel	\$154	(\$0-\$700)	\$2,460	\$287	(\$0-\$1,000)	\$5,170
Miles driven	2,019	(500-4,500)	33,900	1,967	(300-3,600)	35,400
15¢ per mile in 1978	\$318	(\$75-\$675)	\$5,085			
20.5¢ per mile in 1984				\$403	(\$62-\$738)	\$7,257
Food	\$74	(\$25-\$275)	\$1,185	\$120	(\$20-\$200)	\$2,165
Accommodations	\$85	(\$25-\$350)	\$1,360	\$177	(\$0-\$425)	\$3,180
Other expenses	\$17	(\$0-\$100)	\$275	\$171	(\$0-\$920)	\$3,085
Total	\$659		\$10,532	\$1,172		\$21,124

The total cost to the average applicant was \$659 in 1978 as compared to \$1,172 in 1984. However, when adjusted for inflation the real increase was only \$91.

Between 1978 and 1984 the cost of the dean's letter of recommendation rose from \$5.72 to \$8.55, and the cost of three letters of recommendation rose from \$11.22 to \$17.10. These costs represent an increase of 49% and 52% respectively, both less than the general rate of inflation. However, since intern candidates in 1984 applied to a mean number of 13 programs, the total cost to the applicants' medical schools increased from \$99.19 to \$268.65 per applicant (the cost of dictation time is applied only once per letter), an increase of 171% between 1978 and 1984.

### Discussion

In a previous study, we documented the high cost of recruiting interns at the University of Virginia Medical Center, and provided some suggestions for controlling these costs.<sup>1</sup> These efforts include the use of a central office for administering the program, designated interview days, and prescreening of applicants prior to issuing invitations for an interview. In addition, we suggested that costs nationwide could be contained by limiting the number of programs at which an applicant may interview and by restricting the number of dean's letters sent for each applicant. The present study was undertaken in order to determine the effect of these efforts in controlling the cost of recruiting interns.

Overall, there was a 58% increase in the cost to our institution for recruiting interns. Prescreening of applicants resulted in a 33% decrease in the number of potential interns interviewed during a time when the number of applicants accepted actually increased by 16%. The cost to our institution per candidate recruited increased from \$1,469 to \$2,010, a 37% increase, which is considerably below the inflation rate. By recruiting a larger number of candidates in 1984 as compared to 1978, the cost per candidate increased modestly. There was a 78% increase in the cost to the candidates for the interviewing process between 1978 and 1984. A major factor accounting for these increases was inflation.

Direct costs to the hospital for materials, services and personnel increased at a rate greater than inflation. Thus, even with the use of a central administrative office, these costs have increased. It is possible that they would be even higher without such an office, however, and we still feel that it is a worthwhile concept. The decline in indirect costs to the hospital for house officer time, when adjusted

for inflation, is accounted for largely by failure of salaries to keep pace with inflation and, to a lesser extent, by a decline in number of applicants interviewed.

Direct departmental costs in terms of secretarial time were basically unchanged over the period when adjusted for inflation. The modest decline of 19% in indirect cost for faculty time can be accounted for on the basis of prescreening and fewer interviews, since salaries increased commensurate with the rate of inflation.

The increase in cost to the candidates for interviews slightly exceeded the inflation rate for the period, owing to the fact that the 1984 group interviewed at more programs than the 1978 group. Informal discussions with the house officers suggest that many enjoy the opportunity to travel, visit friends, and see different parts of the country. Thus the rising cost to the candidates may be artificial; some portion of the cost should probably be allocated to a holiday.

If one extrapolates our estimated institutional cost of \$2,010 per intern recruited, and our estimated cost to each applicant of all 22,052 participants in the NRMP for 1984, the national cost would exceed \$70 million. This does not include the cost to the applicants' medical schools of approximately \$269 per applicant of processing the letters of recommendation.

In summary, we found the major factor in increased recruiting cost was inflation. The two factors that served to limit the increase in recruiting costs were a decrease in the number of applicants interviewed and failure of house officers' salaries to keep pace with inflation. Although inflation has ameliorated recently, we continue to suggest that some limit be established for the number of programs to which intern applicants may apply. We have previously described a mechanism for enforcing that limit, i.e., restricting the number of dean's letters from the applicants' medical schools.

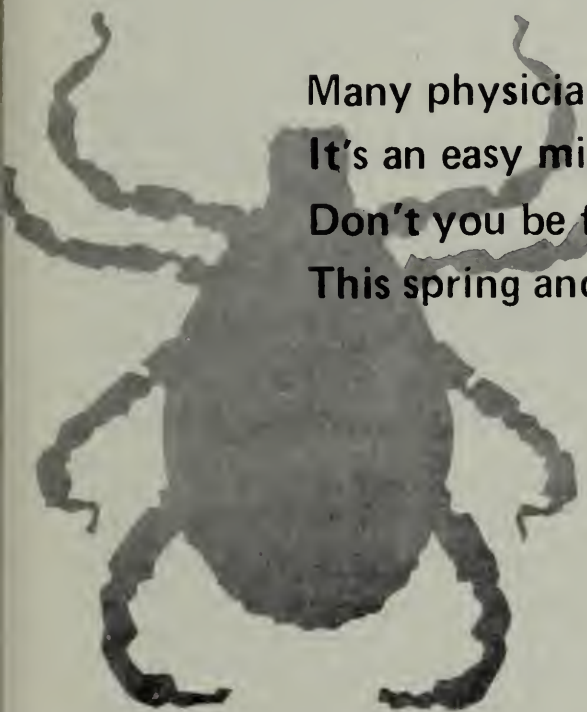
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# Virginia's Hidden Enemy



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# Polymyalgia Rheumatica With Normal Sed Rate and B-Thalassemia: Case Report

David Fields, MD,  
Charles L. Cooke, MD, and  
Robert W. Bedinger, Sr., MD  
*Richmond, Virginia*

**P**OLYMYALGIA rheumatica (PMR) is a well-described idiopathic disease of people over 50 years of age. It is characterized by a typical clinical picture of the rapid onset of bilateral aching and stiffness in the proximal musculature of the shoulders, torso, or pelvic girdle, which is worse in the morning and after periods of inactivity. Overt synovitis is absent to minimal. There is evidence of an underlying systemic inflammatory reaction, with malaise, loss of weight, low grade fever, anemia, and an elevated erythrocyte sedimentation rate. Low dose corticosteroids should produce prompt and dramatic relief of the symptoms. Exclusion of diseases, such as rheumatoid arthritis, fibrositis, and nerve root irritation, is required to make the diagnosis.<sup>1-3</sup>

The erythrocyte sedimentation rate (ESR) is one of the few objective tests which can be used to support an otherwise clinical diagnosis. An ESR is found with such high incidence in PMR (99% in one large study)<sup>3</sup> that to diagnose a patient with a normal ESR as having the disease would be quite rare. Such exceptions to this rule have been reported with no causal explanation,<sup>4-6</sup> or because of technical factors in determining the sedimentation rate,<sup>7</sup> or previous treatment with steroids; but to our knowledge there has been no report of a patient with PMR and a normal ESR secondary to a hemoglobinopathy. We report such a case.

## Case Report

A 70-year-old Caucasian male presented to his physician with a complaint of severe pain in the

neck, shoulders, and arms for three months. His pain and stiffness were severe enough in the morning to prevent him from dressing himself. He was given piroxicam (Feldene®) and a prescription for home cervical traction, which did not help at all. The pain became so bothersome that he could not sleep at night. He consulted several other physicians. indomethacin produced no effect. Once corticosteroids were injected into the right shoulder, which not only dramatically improved that shoulder, but stopped the pain and stiffness in the other shoulder also.

He reported a recent 4-5 pound weight loss. There was no aggravation of the pain with coughing, sneezing, or rotary movement of the head. He reported no malar rash, pain in the hands or feet, seizures, psychosis, and no pleuritic pain. At no time had there been objective changes in the joints.

Physical examination revealed non-tender temporal arteries, no mouth ulcers, atrophy of the arm muscles, "trigger" points, joint effusions, crepitus or synovitis. He had a full range of motion of all peripheral joints. No neurological changes were noted.

The patient was given 40 mgs of prednisone as a test at 12 PM and reported to his physician the next day that he had received relief within six hours, allowing his best night's sleep in three months. The relief lasted for 3-4 days before the pain returned. Again he was given prednisone 40 mgs with similar results.

Laboratory studies revealed a positive ANA test with a titer of 1 : 200 with a peripheral pattern. A test for anti-single stranded DNA was positive in a titer of 1 : 20. Tests for anti-double stranded DNA, extractable nuclear antigen, LE cells, rheumatoid factor and protein electrophoresis were either negative or normal. The serum immunophoresis showed a slight polyclonal elevation of the IgM fraction. WBC count was 10,700/mm<sup>3</sup>, with 85% neutrophils, 13% lymphs, and 2% eosinophils. The platelets were reported at 393,000/mm<sup>3</sup>. Two determinations of the sedimentation rate showed values of 0 mm/hour and 12 mm/hour by the Wintrobe method with correction for the hematocrit. The patient had a hemoglobin of 10.6 grams/dl, a hematocrit of 35.6%, and a mean corpuscular volume of 70 mcl<sup>3</sup>/cell. The reticulocyte count was 2.6% (normal 0.5 - 1.5%). The serum iron was 65 mcg/dl (normal 42 - 135 mcg/dl), and the total iron binding capacity was 342 mcg/dl (normal 280 - 400 mcg/dl). The peripheral smear showed predominantly hypochromic, microcytic cells. Some macrocytes were present. Basophilic stippling and teardrop cells were seen. The hemo-

From the McGuire Clinic, 7702 Parham Road, Richmond VA 23229. Address correspondence to Dr. Cooke.  
Submitted 11-4-84.

**Table 1. Causes of Decreased Erythrocyte Sedimentation Rate.**

Sedimentation Rate	Mechanism
Macroglobinemia <sup>9</sup>	Hyperviscosity
Polycythemia vera <sup>10</sup>	High RBC density
Sickle cell anemia <sup>11</sup>	Anisocytosis and poikilocytosis inhibiting rouleaux
Spherocytosis	Anisocytosis and poikilocytosis inhibiting rouleaux
B-thalassemia	Anisocytosis and poikilocytosis inhibiting rouleaux

globin A<sub>2</sub> level was markedly elevated.

The patient was diagnosed as having both polymyalgia rheumatica and B-thalassemia trait and was started on 10 mg of prednisone daily with dramatic relief from symptoms. As this is written 18 months later, he remains totally symptom-free on 5 mg prednisone a day. He is active, plays golf, and has shown no evidence whatsoever of rheumatoid disease.

### Discussion

The patient's history is consistent with PMR. His dramatic response to prednisone is particularly impressive and further supports the diagnosis. Other diseases can be ruled out. Of the 11 criteria for the classification of systemic lupus erythematosus, he meets only two, which are the positive ANA and anti-DNA (four are needed for diagnosis). A positive ANA is also found in 19% of those with PMR and was shown to have no effect on either symptomatology or outcome.<sup>3</sup> The patient had no synovitis or rheumatoid factor activity to suggest rheumatoid arthritis. He had no weakness, atrophy, or abnormal muscle enzymes to suggest polymyositis. There were no trigger points to suggest fibrositis. The patient did have some cervical spondylosis on x-ray, but the pain was aching, not sharp. It was bilateral and not associated with head movement.

During a systemic inflammatory reaction, proteins are produced, mainly fibrinogen and gamma globulins,<sup>8</sup> which neutralize the negatively charged red blood cell membranes and cause them to form rouleaux. The aggregates have a lower surface to volume ratio than the individual red blood cells and thus sediment faster. Table 1 lists several factors

that can inhibit the inflammatory reaction from causing an increased sedimentation rate, thus masking its presence. These factors should be sought in patients with a clinical picture of polymyalgia rheumatica and a normal erythrocyte sedimentation rate. If present, they explain this distinctly unusual situation.

### Summary

This case suggests that in people with a picture of polymyalgia rheumatica with normal erythrocyte sedimentation rate, hemoglobinopathies and several other disorders should be sought to explain the unusual situation. Clearly, a normal ESR does not exclude a diagnosis of PMR.

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# VIRGINIA MEDICAL EDITORIAL

## Please Disturb

I EXPECT that if most of us had our way about many things, particularly the way we practice medicine, the motto "Please Do Not Disturb" would be our choice. And why not? All we want is to be left alone to practice medicine—and, some would say, to make big bucks. I'm sure the public thinks the latter, while most of us think the former. At least I hope that is the way we feel.

However, rather than think how nice it would be to be left more alone, more of us should ask how we can get more involved in our communities. Recently when I attended the AMA Leadership Conference, one AMA staff member presented some survey data revealing that a significant percentage of doctors say they will not see patients unless they have money or some other guaranteed payment mechanism up front.

Surveys continue to show doctors and medicine as a respected group, but our image is slipping and has been for some time. This information about attitudes toward prepayment certainly doesn't help. I read an argument given by a doctor-educator that the constraints (both financial and regulatory) placed on medical practice by the federal government, the change from solo to group practice, formation of HMOs, DRGs, etc., etc. would result in some of the brighter minds going into fields other than medicine—a loss to our profession.

People who would be deterred by such factors most likely are not very interested in medicine or committed to helping people. Actions speak for

themselves. If we, as a profession, become interested only in ourselves and in the preservation of our incomes, then the prospects for any improvement in public attitudes toward us is pretty bleak. I don't think the public objects to physicians making a good income as long as they believe we care about them and the communities in which we live. But what, in addition to the services we provide for a fee, do we give back to the community? For example, do we volunteer to be team physicians, to do physicals for youth groups? Do we belong to any civic groups, participate in activities related to church or synagogue? Do we really extend ourselves in any way? Or does the free service we give amount to only those bills we can't collect? We must be honest with ourselves. While many of us *do* devote a great deal of time and energy to our community and helping others, others do not. [Editors' Note: To read how some Waynesboro physicians contributed to their community, turn to page 000.]

It is time more physicians started thinking more about active community service. We must take our heads out of the sand. Face up to the facts as to why public perception of us is changing. Let's not waste time blaming others. This has to start at home with Number One. Times have changed and we must meet the challenge.

I don't think anything I have said means that we shouldn't be business-like in our approach to medicine. Nor does it mean we shouldn't be competitive. But also, medicine is a much less personal

profession than it once was, so we must work harder to make people see we care about them and our communities.

As physicians, we were trained to be concerned about others. If this is true, it is time that more of us spent more time outside our offices contributing to the quality of life in our communities.

So let's all of us make more of a commitment to spend less time behind "Please Do Not Disturb" signs and to start "disturbing" the status quo in a positive and constructive manner by becoming more involved in our communities. A multitude of opportunities await our participation.

C. BARRIE COOK, MD

The Fairfax Hospital  
3300 Gallows Road, Falls Church VA 22046

## An Iatrogenic Disease

When we view the demise of the practice of medicine as we once knew it, the question arises as to how we got into our present dismal state. There had been innumerable speeches by leaders of medicine warning physicians of coming encroachment by third parties. There had been many editorials drawing attention to government actions limiting the doctors' abilities to make their own judgments in trying to do the best for our patients. Many conferences and seminars had been held to deal with the enormous medical liability crisis which was about to engulf American medicine. A call for political action had been issued and a plea for all physicians to close ranks and join organized medicine had been repeated by our leaders.

Yet today we face the worst future that American Medicine has ever been subjected to. Our intellectual freedom and judgment has been taken away from us by third party payors and their inspectors and consultants. No longer is the welfare of our patients paramount to our profession; cost containment has taken its place. No longer is quality of care our primary aim; defensive medicine now rules our thoughts. Politics and economics have become the dominant forces affecting medical care in America today.

The physician's legendary individualism is to blame for the sorry state we are in. We have ignored the warnings and scoffed at our leadership. We "knew better" and knew it would not happen here.

One can only conclude that we are suffering from an iatrogenic disease. We did it to ourselves, with our lack of cohesion, our apathy and our ignorance.

W. LEONARD WEYL, MD

611 South Carlin Springs Road  
Arlington VA 22204

## And On and On...

IN CASE you came in late, everything is not hunky-dory with the State Board of Medicine. The running battle for control of that body continues, i.e., consumer and bureaucrat versus the medical profession. A little history: In 1977 the General Assembly, in its wisdom, established a consumer-oriented Health Regulatory Commission (four public members and one member from each of the health regulatory boards). Under the Health Regulatory Commission were the seven health regulatory boards, headed by an appointed director. In 1983 the three boards of behavioral sciences were added.

At the time the above legislation was enacted (1977), it was anticipated by the boards that each would continue to function independently, with the director of Health Regulatory Boards serving as coordinator and administrator. However, as the director now points out, the legislation provides that responsibility for the budget (and therefore the personnel, et cetera) lies with that office. Recent newspaper articles have been highly critical as to the effectiveness of the State Board of Medicine. The Board attempted to respond by promoting legislation to add key employees and thereby increase the level of efficiency; however, they have learned that neophytes are hardly a match for seasoned politicians. The battle was won; failure of implementation leaves the major issue still in doubt.

The Medical Society of Virginia has appointed a committee to investigate the needs of the State Board of Medicine and provide any possible help. Under the leadership of Dr. Charles M. Caravati, Jr., the committee is functioning well. There are many ways in which The Medical Society of Virginia can help; however, the major contribution will be the promotion of legislation returning responsibility to the individual boards, with the duties of the director of Health Regulatory Boards defined as that of administrator and coordinator.

EDWIN L. KENDIG, JR., MD

# VIRGINIA MEDICAL OBITUARY

## Hunter S. Jackson, MD

Dr. Hunter S. Jackson, who had practiced plastic and reconstructive surgery in Richmond since 1950, died May 12 in a Richmond hospital. He was 66 years old.

A Richmond native, Dr. Jackson was a graduate of the University of Richmond and earned his medical degree at the Medical College of Virginia, followed by training at the University of Minnesota. He was head of plastic surgery at Children's Hospital, associate professor of surgery at MCV, and a member of the board of medical advisers to the Virginia Department of Rehabilitation. His professional memberships included The Medical Society of Virginia, Richmond Academy of Medicine, American College of Surgeons, and the American, Virginia and Southeastern Societies of Plastic and Reconstructive Surgery.

## Memoir of M. K. King 1903-1985

*By R. Bryan Grinnan, MD, Walter P. Adams, MD,  
and M. Foscue Brock, MD*

Dr. Marion Kirwan King was born March 2nd, 1903, the son of Thomas William King and Josephine Bell King, in Haynesville, Virginia, on the Northern Neck. He died at home on March 9.

He was educated in a one room school house, near his boyhood home, run by one man. He later attended Callao High School, in the town of Callao, and on graduation, received his college education at Elon College in North Carolina and Lincoln Memorial College in Tennessee. At Elon he worked in the bakery and studied at night while the bread rose. He later worked in the coal mines and also became a surveyor. In order to raise money he also emptied coal cars, by shoveling for 25¢ an hour. All this was done to pay his way through school. He was accepted at the Medical College of Virginia but had to work for two years to raise enough money to pay his tuition; to do this he joined the police force in Washington, DC and became a traffic cop. At 18th and Pennsylvania Avenue, on one occasion, he stopped President Coolidge and his entourage; this got his picture in the newspaper. He then received a

DuPont scholarship, which was a loan; in 1930, on the day of his graduation from medical school, the loan was canceled by Mrs. DuPont.

Dr. King then entered the Public Health Service. He took his internship and residency in New Orleans and, while on the boat to New Orleans, he met Cherry Irene Martin from New York, and in 1932 they were married there. He later became the chief of surgical service at the Savannah Marine Hospital for four years. He spent the World War II years as chief of surgery at the Marine Hospital in Norfolk.

Dr. King entered surgical practice in Norfolk in 1945 and was consultant in surgery at the US Marine and Naval Hospitals. Dr. King was a fellow of the American College of Surgeons, a diplomate of the American Board of Surgery, and an honorary member of the Spanish College of Surgeons.

He enjoyed the company of his friends, played golf regularly, and enjoyed hunting. He even went on a safari in Africa while his son, Dr. John Norman King, was practicing there. He also enjoyed playing poker with a group of friends, for very reasonable stakes.

Dr. King is survived by his wife; by three sons, Martin Kirwan King, with the Exxon Company; Dr. John Norman King, a surgeon and his partner in practice; and Lawrence G. King, a chief systems engineer with the Harris Corporation; and by his daughter, Chere Irene Chapman. He had ten grandchildren.

Dr. King enjoyed a busy practice of general surgery for 47 years and was admired and loved by his friends, patients and associates.

## Memoir of Nat Ewing 1913-1985

*By Beryl H. Owens, MD*

Dr. Nathaniel C. Ewing died on April 2, 1985, at the University of Tennessee Hospital in Knoxville, after a short illness. He was 71 years old.

Nat followed his father into family practice at Jonesville, Virginia, where he continued for 38 years. He gave freely of his time and was a force behind many charities, business, civic and professional endeavors.

Continuing medical education speakers at the

Lee County Community Hospital will remember Nat saying, "If you've got a little time, I'd like to show you some of our county."

Nat will be sadly missed by his devoted wife, Virginia Kennedy Ewing, his family, his patients, his friends, his county, and by the Lee County Medical Society.

## Memoir of W. F. Cavedo 1910-1983

*By William R. Hill, MD, A. L. Herring, Jr., MD,  
and William A. Young, MD*

William Fitzgerald Cavedo was born on March 14, 1910, the son of Lelia Britt and William Seabrook Cavedo, and died on December 20, 1983, at the age of 73. His father owned and operated Cavedo's Drug Store at the corner of Floyd Avenue and Robinson Street near Retreat Hospital in Richmond. This store was well known in the community and served the West End of Richmond for many years.

Fitzgerald Cavedo, better known as "Fitz", attended public schools in Richmond and was graduated from Richmond College, now the University of Richmond. He received his medical degree from the Medical College of Virginia in June, 1937. The next year, 1937-1938, he served an internship at the Medical College of Virginia. The next year he served a one year surgical residency at Grace Hospital. Following he spent one year at New York Polyclinic Medical School in Operative Obstetrics and Gynecology.

Fitz was well respected among his colleagues and enjoyed a large family practice until the last few years of his life. About 1971 Fitz suffered a stroke which left him partially paralyzed. However, after his recovery and with the help of a dedicated staff and wife he continued to do office practice until about 1979 when he suffered a second stroke. He closed his office and entered a nursing home in March, 1983, where he remained until his death.

He is survived by his wife, Amy Bumpass Cavedo; his daughters, Dr. Barbara C. Worthington of Winston-Salem, North Carolina, and Mrs. Amy C. Swartz of Glen Allen, Virginia; one grandson, Tyler Clarke Worthington of Winston-Salem, and one brother, Willis Cavedo of Atlanta, Georgia.

Fitz Cavedo was a physician who never sought publicity but was dedicated to his patients and their well being. He will be missed by his colleagues, many patients and friends.

## Memoir of D. M. Levy 1930-1984

*By Abdon Reina, MD, R. H. Skeppstrom, MD,  
and Jerome D. Perlman, MD*

Dr. Donald Marvin Levy died on July 9, 1984, at the age of 54. Born in Baltimore, Maryland, his youth was spent in Suffolk, Virginia. Dr. Levy earned his bachelor's degree at the University of Virginia in 1951 and was a graduate of the University of Virginia School of Medicine in 1955. While attending the University of Virginia, he was elected to membership in Phi Beta Kappa and Alpha Omega Alpha.

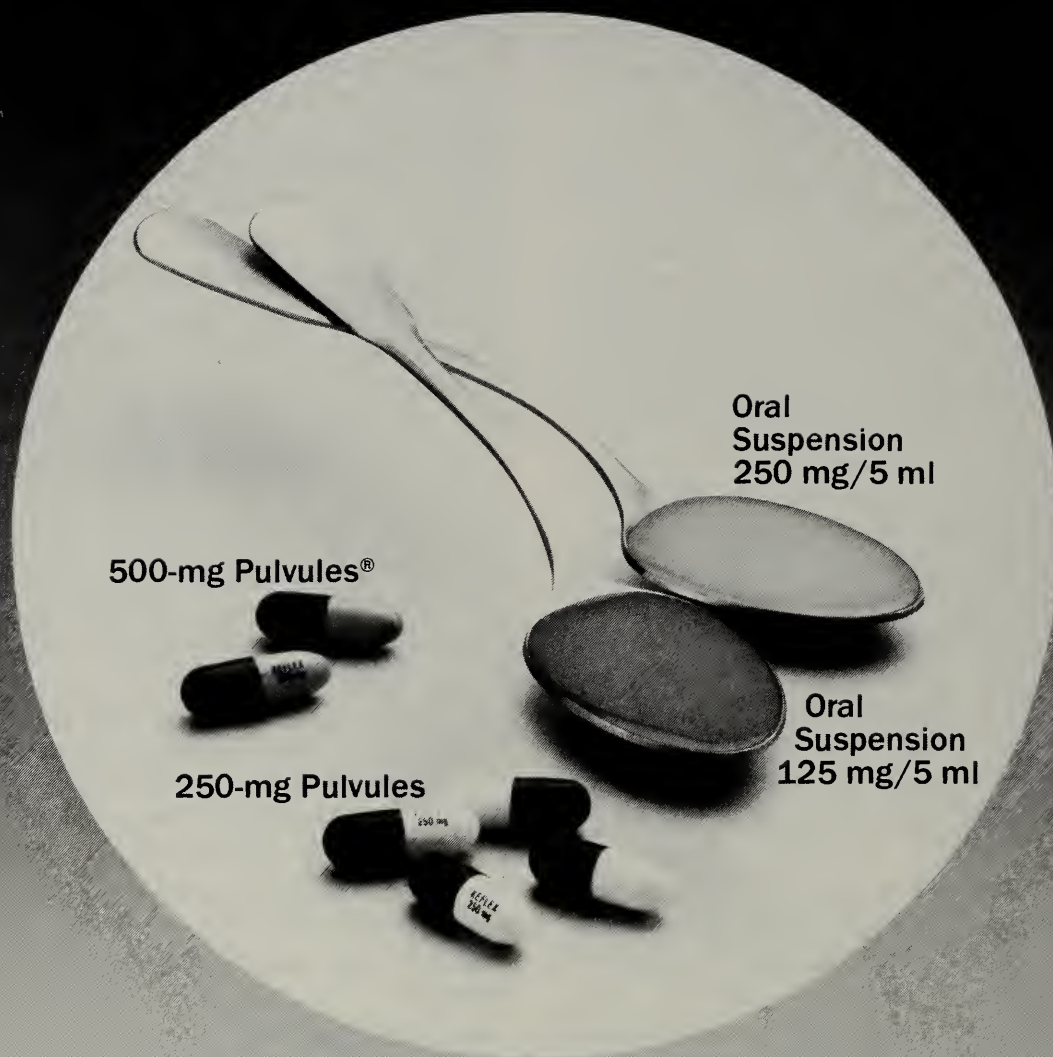
Dr. Levy served his internship at Grace New Haven Hospital, Yale University Medical Center, New Haven, Connecticut. He served on active duty in the United States Navy Medical Corps at the Philadelphia Naval Hospital. Dr. Levy continued his neurology training at the Baltimore City Hospitals and Johns Hopkins Hospital. He was a research fellow in neuroanatomy in Norfolk. He was a member of the staffs of DePaul Hospital, Norfolk General Hospital, Children's Hospital of the King's Daughters, and Chesapeake General Hospital. He also served as a consultant at the Louise Obici Hospital in Suffolk. He held the position of associate professor of neurology at Eastern Virginia Medical School.

Dr. Levy was an active member of the American Academy of Neurology, the American Medical Association, The Medical Society of Virginia, Norfolk Academy of Medicine, Tidewater Neurological Society, and Virginia Neurological Society, for which he had served as secretary-treasurer. He was a member of Beth El Congregation and served as treasurer and vice president of the Torch Club of Norfolk.

He is survived by his wife, Frances Davis Levy; a daughter, Susan Dena; and four sons, Jeffrey Charles, Michael Jay, Stephen Phillip, and Douglas Selig, all of Norfolk; his father, Sam Levy, and a brother, Stuart Levy, both of Suffolk.

Dr. Levy was a dedicated specialist in neurology who was extremely well-read and widely respected by his colleagues in medicine. He continued to practice in spite of multiple obstacles brought about by severe injuries sustained in an automobile accident in July 1980. Throughout all of this, he maintained his devotion to his patients and his interest in resolving their problems. His untimely death has created a void in the medical community and a great loss to his family, patients, colleagues and friends.

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# MEDICAL

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## MEDIBYTES

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- 481**    **Report of the Annual Meeting of the AMA.**  
“For the good of our patients and in the best interests of American medicine.”  
*Raymond S. Brown*

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## COMMUNITY SERVICE

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- 490**    **Rx: A Place to Play.**  
“Altogether, we raised \$20,000. Mostly, though, we raised people’s spirits.”  
*Bernard M. Williams*

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## MEDICINE

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- 504**    **Grand Rounds: Management of Theophylline Toxicity.**  
“With the continued use of sustained-release preparations, theophylline toxicity may become more frequent.”  
*Curtis N. Sessler*
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Answers to tough questions about adjuvant chemotherapy in breast cancer.  
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## LEADERSHIP

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- 503**    Officers of The Medical Society of Virginia
- 526**    Officers of Virginia’s Component Medical Societies
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## SPECIAL INSERT

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- 474**    Virginia’s Natural Death Act, enacted in 1983, offers a statutory “safe harbor” to physicians. VIRGINIA MEDICAL brings you a Natural Death Act brochure and offers to send you copies to distribute to your patients. This is the brochure that triggered an avalanche of requests when the Richmond Academy of Medicine offered it as a public service in a newspaper ad. With it, a guide to the Act’s provisions.

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## DEPARTMENTS

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# Physician's Guide to the Natural Death Act

FROM the time it became effective in 1983, the Natural Death Act has offered a statutory "safe harbor" for the Virginia physician who complies in good faith with its provisions. These are the steps the law requires and the definitions it makes:

1. A patient makes a declaration directing the withholding or withdrawing of life-prolonging procedures in the event of a terminal condition. If the declaration is written, it must be signed by the patient and two witnesses, neither of which may be the patient's spouse or blood relative but one of which may be the physician.

If the declaration is oral, it is valid only (i) if made after the patient has been diagnosed as having a terminal condition and (ii) if it is made in the presence of a physician and two witnesses, neither of which may be the patient's spouse or blood relative.

2. If the patient has made a valid declaration and is competent, the attending physician must then certify in writing that the patient has a terminal condition before withholding or withdrawing a life-prolonging procedure.

The law defines "terminal condition" as "a condition caused by injury, disease or illness from which, to a reasonable degree of medical certainty, (i) there can be no recovery and (ii) death is imminent."

"Life-prolonging procedure" is defined by the Act as "any medical procedure, treatment or intervention which (i) utilizes mechanical or other artificial means to sustain, restore or supplant a spontaneous vital function or is otherwise of such a nature as to afford a patient no reasonable expectation of recovery from a terminal condition and (ii) when applied to a patient in a terminal condition, would serve only to prolong the dying process; however, nothing in this act shall prohibit the administration of medication or the performance of any medical procedure deemed necessary to provide comfort care or to alleviate pain."

4. If the patient has made a valid declaration but is "comatose, incompetent, or otherwise physically or mentally incapable of communication," the attending physician must certify in writing that the patient has a terminal condition and must also have one other physician examine the patient and

do likewise before withholding or withdrawing a life-prolonging procedure.

5. In the case of a patient who is comatose, incompetent or otherwise physically or mentally incapable of communication and who has not made a written or oral declaration, the Act designates a person or persons with whom the attending physician must consult and agree prior to withholding or withdrawing a life-prolonging procedure.

Listed in order of priority, these designated persons are 1) any guardian or committee judicially appointed on behalf of the patient; 2) anyone designated in writing by the patient to make the treatment decision; 3) the patient's spouse; 4) an adult child of the patient or a majority of the children who are reasonably available for consultation; 5) the parents of the patient; 6) the nearest living relative of the patient.

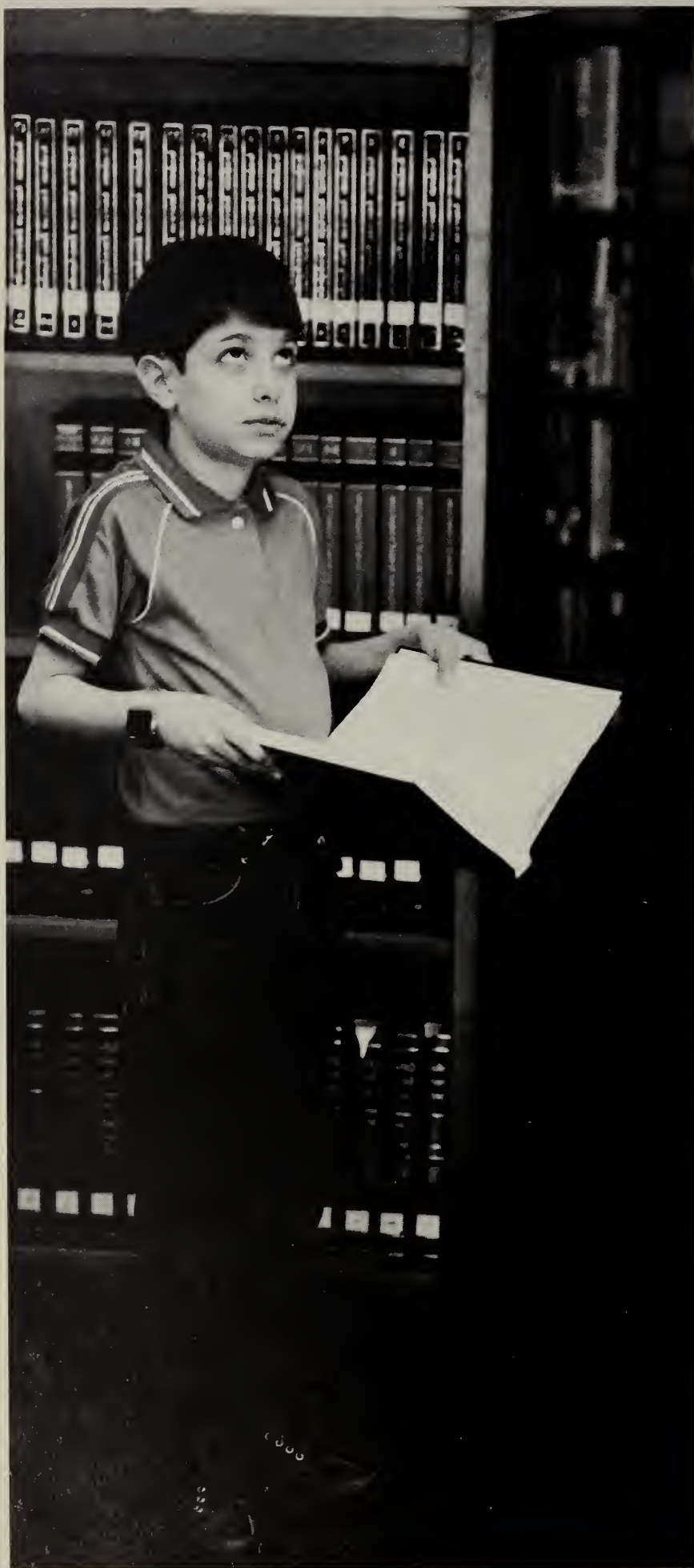
If no one in the first category is "reasonably available, willing and competent to act," the physician may go to the next priority, and then the next, until an appropriate person is located.

But when the physician must turn to any of the family members in the last four categories, the physician (i) must insure that there are two witnesses present when the treatment decision is made with those family members, and the patient's spouse and blood relatives may not serve as either of these witnesses, and (ii) must get consent from two persons in any of the last four categories if two are reasonably available.

Two points should be emphasized. First, the Act does not apply to patients who are under 18 years of age. Second, if a physician does not want to direct the withholding or withdrawing of life-prolonging procedures as authorized by this Act, he has no obligation to do so; he must, however, offer to transfer the patient to another physician.

The Act, which does not eliminate any immunity a physician already may have under the common law, is to be codified as Virginia Code §§ 54-325.8:1-54-325.8:13.

*Attorneys Sandra Kramer and Allen C. Goolsby III developed this legal information for the June 1983 issue of VIRGINIA MEDICAL. It has been slightly revised for this reprinting.*



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\*JAMA, Volume 248, No. 3, pages 336-339  
Yearbook of Medicine, 1983, pages 66-67  
Pediatric Infectious Disease, Volume 3, No. 6, pages 514-517

# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

### AMA MOVES ON 155 RESOLUTIONS; HOTCHKISS HEADS TRUSTEES

The Annual Meeting of the American Medical Association occurred June 16-20 in Chicago, and the Editors commissioned AMA Delegate Raymond S. Brown to furnish a report. Here it is.

By the time of the Saturday night "get-together" in the Virginia Suite at the Marriott Hotel, many of The Medical Society of Virginia's delegation to the AMA's June meeting had been in Chicago working for several days, for instance, **Dr. William S. Hotchkiss** on Board of Trustees activities; **Dr. W. Leonard Weyl** on AMPAC board duties; **Dr. George J. Carroll** and **Dr. J. Hayden Hollingsworth** at the Hospital Staff Section meetings.

At 7 am Sunday the group assembled for review of the Board reports and resolutions. Delegates and alternate delegates had been assigned different reference committees to monitor and report on. **Dr. William J. Hagood, Jr.**, was assigned to the committee on amendments to the constitution and bylaws. **Dr. H. C. Alexander, III**, was to sit in on the committee concerned with insurance and medical service. **Dr. Charles M. Caravati, Jr.**, fielded the reference committee on legislation, while **Dr. A.A. Kirk** was assigned the medical education area. To **Dr. Percy Wootton** went responsibility for the committee concerned with hospitals and medical facilities, while **Dr. Paul Kaufman** drew the committee dealing with scientific affairs/public health. The Board of Trustees would have the company of **Dr. Harold L. Williams**, and **Dr. Richard L. Fields** and **Dr. Sam Barton** were to join the committee labeled "miscellaneous". We try to assign at least one and usually two MSV delegates to each committee.

Strategy for support or opposition to various resolutions and reports was discussed, and delegates volunteered or were assigned by the delegation leader, **Dr. Michael A. Puzak**, to speak on the floor of the House to these subjects. The delegation then went to the assembly of the Southeastern states to hear talks by several AMA officers. **Dr. Hotchkiss** talked cogently on the topics and problems facing the federation of organized medicine today, and there were brief remarks by the candidates for the Board of Trustees and Council positions.

The House of Delegates assembled that afternoon, 370 strong, for the opening ceremonies, Board reports,

the meeting prepared to support The Medical Society of Virginia's views, both by our six votes and by our discussion on the floor of the House, where indicated. The reports and resolutions considered and voted upon covered all of medicine's concerns today, from corporal punishment of school children (the House was opposed), to a request to Congress to help us with our malpractice problems by giving financial inducements to states to pass tort reform legislation. There were 231 separate items. All were handled democratically with minimal limitation of debate.

There was a large number of reporters at the meeting. Reporters tend to report things that are catchy rather than things that may well be more important. Among the items chosen for publication by the Chicago newspapers were a resolution proposing a tobacco-free society by the year 2000, a resolution about the possible dangers of the ultraviolet tanning shops, and a resolution opposed to spanking school children. Significant actions on drunk driving, on ethical and moral considerations of medical practices today, and on support for basic human rights were not mentioned by the Chicago press, to my knowledge.

Election of officers and Council members occurred on Wednesday. The President Elect, Dr. John Coury, Jr., was not opposed, nor were the Speaker, Dr. James Davis, and the Vice Speaker, Dr. John Clowe, but the races for trustees and Council seats were heavily contested. When the new Board convened after the House adjourned, **Dr. Hotchkiss** was elected Chairman. A Past President of the Norfolk Academy of Medicine and The Medical Society of Virginia, Dr. Hotchkiss formerly served on the AMA's Judicial Council and has been on the Board of Trustees for seven years, serving successively as secretary-treasurer and vice chairman of that distinguished body.

The inauguration of the new AMA President, Dr. Harrison L. Rogers, was an impressive ceremony, and his speech was inspiring and, at times, sobering. We wound up our work on Thursday morning with discussion of the final reference committee reports, then went on to the House of Delegates, where despite the pressure of flight and hotel checkout times, the reports and resolutions were thoroughly discussed and voted on for the good of our patients and in the best interests of American medicine.

--Raymond S. Brown, MD



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# COMMUNITY SERVICE

## Rx: A Place to Play

*Creative ability and play are closely related in that playing around with ideas and fantasies may lead to creative innovation that the sober use of directed thinking cannot reach. —Erick Erickson*

**A**T A MEETING of the American Psychiatric Association in San Francisco, I took my son one fine afternoon to Golden Gate Park. To our delight we found a great big section expressly for children. There were swings and slides and climbing gyms and other paraphernalia such as one customarily encounters in a playground, but what captivated both of us were some fantastic structures of wood—bridges, tunnels, a castle, a rocket ship, and other wonderful shapes. Children and adults were swarming all over them, having a wonderful time, and we lost no time in joining them. I crawled and climbed right along with my son. Gosh, I thought, you have to live in a big city to have a good park. When we got back home and I took my son to Waynesboro's Ridgeview Park, it looked bleaker than ever, with its 20-year-old playground equipment. We were the only ones there.

Sometime later I read in the Washington Post about an architect, Robert S. Leathers, of Ithaca, New York, who designs "creative playgrounds." The illustrations of his work looked like the shapes at Golden Gate Park. The article described how the people of the community raised the money for the materials and then built it themselves from the architect's plans. My wife, Lucille, and I thought it was a great idea and went to the head of the City Department of Recreation, Joseph M. Hickson, Jr. Could we put a creative playground in Ridgeview Park? We quickly got the enthusiastic approval of both Mr. Hickson and the City Council.

My wife set about raising funds by getting together a Creative Recreation Committee. I donated \$500 to get them started. Then I called all the doctors and dentists in Waynesboro and collected \$2500 toward the project. Leathers was engaged and came to Waynesboro for on-site observations. Construction dates were set for early November, eight months

away, to let the community know we were serious and that this project was really going to happen.

With a goal of raising \$14,000, the committee members knocked on neighbors' doors and appealed to business executives. Armed with slides of successful playgrounds in other communities and a list of needed materials, they spoke at meetings of local clubs and civic organizations. The local news media was a big help in letting the town know of the project's goals and needs, particularly the local newspaper, the News-Virginian, which ran feature stories describing the project, published daily reports on the progress of the fund and pictures of people who gave substantial sums. All of this aroused popular support.

Six months after the first news release, the committee had the \$14,000 and donations of most of the specified materials. Almost all of the hardware needed to build was donated, as were 300 big truck tires, some of the needed lumber, and 140 tons of gravel—and a hauling firm donated the gravel's delivery. A surveyor donated his services after hearing about the project at a PTA meeting.

**T**HE CONSTRUCTION was a four-day effort. It rained the first day, a Thursday, but that didn't deter a crew of retired engineers, businessmen, homemakers and other workers skilled and unskilled who roughed out the plan and laid in some basics. On succeeding days the skies cleared and volunteers were at work all over the construction area. A group of Fishburne Military Academy cadets washed the tires. A dozen Vepco workers and crane operators donated their time and energy from 5 to 8 PM to drill the holes for 100 utility poles that would support elements of the installation. A high school civics class and a troop of Girl Scouts spread gravel and sanded some lumber. One employee of a local industrial plant took two annual leave days to help with the construction.

Pulled up to the construction site was a big trailer filled with tools, including 15 circular saws, 35 extension cords, and 100 hammers that had been

loaned for use by the volunteer builders. Donated hot and cold food and snacks for the workers was dispensed all day from the trailer.

Things got into high gear on Sunday, when 400 volunteers turned out to saw, nail, sand, bolt, hoist and otherwise bring the playground to a finish. They were divided into teams. I worked all day setting tires into place and binding them together for a tunnel. From time to time I caught glimpses of these other Waynesboro doctors at work: Dr. Charles R. Pauly, Dr. John A. Legett, Dr. Randolph C. Mahnesmith, Dr. Charles F. Andersen, Dr. Stephen A. Howlett, Dr. James E. Nathe, Dr. John Spahr, and Dr. William E. Rogers. Here and there families were working together. Little children were looked after in a nursery staffed by volunteers.

Finally it was all in—a castle maze with a dungeon, a tepee, tunnels, a fort with a covered bridge, hand-over-hand rings to get from one adventure to another, ramps for wheelchair access, small apparatus and sand boxes for toddlers, ladders, climbing cubes, fun for everyone in an area that is two-thirds the size of a football field.

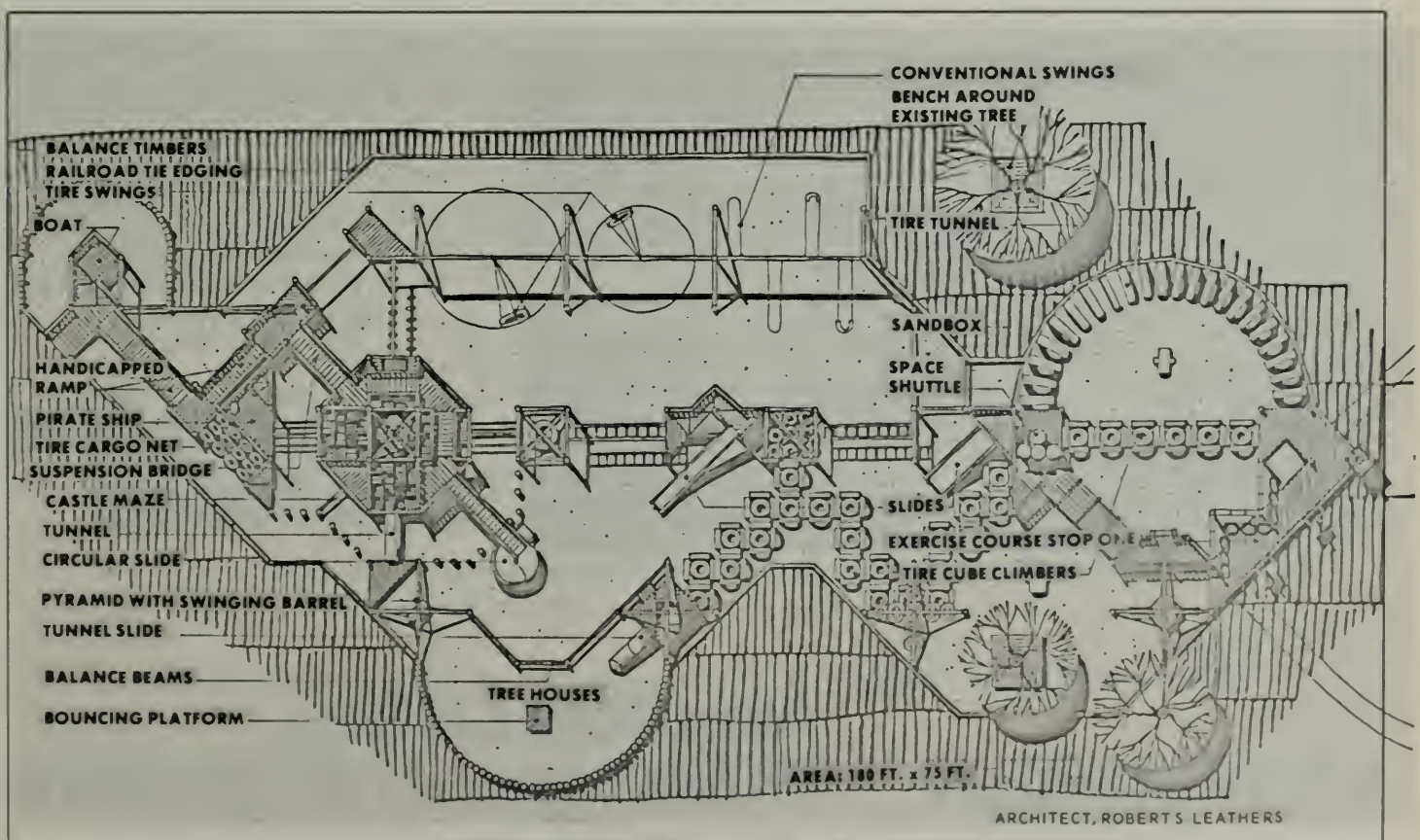
It has become a gathering place for the community, a place where children and parents enjoy themselves together. Even when it snows the kids are there. As a psychiatrist, I am much aware of the emotional and physical implications of creative play. Many humans lack the skills necessary to enjoy life. This unhealthy characteristic results most frequently from being reared by parents who have difficulty enjoying themselves, and the pathology is often passed from one generation to another. Those of us who appreciate the importance of play are able to provide ourselves with appropriate diversions from the stresses day-to-day living. Physicians are particularly attuned to the need for creative activity as a means of gaining a healthy, balanced life.

Physicians also are particularly equipped to get things like this playground done. Our patients see us as an affluent group, they see us as leaders. There are wonderful benefits for both the health of the community and for our public image in a project like this.

BERNARD M. WILLIAMS, MD

**A**LTOGETHER we raised \$20,000. Mostly, though, we raised people's spirits—and this at a time when Waynesboro was in a depression, with 10% unemployment. Everyone loves that play-

Dr. Williams left Waynesboro last month to join the Macon Psychiatric Clinic, 596 Arlington Place, Macon GA 31201.



Architect's rendering of the Ridgeview Park Creative Play Area. Courtesy the Waynesboro News-Virginian.

# Take Two Aspirin And Call Us In The Morning.

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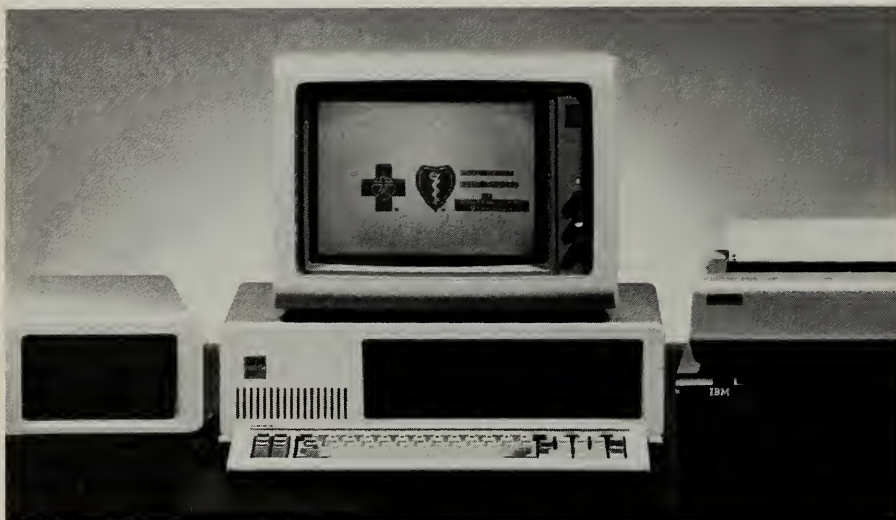
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# Unification: Points of View

The Council of The Medical Society of Virginia has proposed that the Society adopt unified membership.

The Society's House of Delegates is to consider that recommendation at the annual meeting on November 9.

In this section six Medical Society of Virginia members set forth their opinions on unified membership.

---

## WILLIAM S. HOTCHKISS:

**"I submit that what we have today is disorganized medicine."**

**O**N May 5, 1985, the Kansas Medical Society became the first state medical society in 24 years to adopt unified membership with the American Medical Association. One month later the House of Delegates of the Mississippi State Medical Association voted to adopt unified membership with the AMA. Hopefully, they will be the first of many state medical societies to recognize the need for professional unity at all levels—county, state and national—in these perilous times for health care. I personally hope that The Medical Society of Virginia will be one of the state societies which comes to the realization that unified membership is the only responsible choice for medicine in the 1980s.

Several of us who are Trustees of the AMA share the duties of testifying before the committees of Congress. We are frequently asked: "How many members do you have?" Our answer is frequently followed by another question: "What percentage of American physicians does this represent?" When we answer 44%, our critics in Congress seize the opportunity to point out that we don't represent the majority of doctors. This adds additional weight to others who are opposing our views and implies that all the other doctors support their views. The only way to remedy this sad state of affairs is to increase AMA membership. Unification is the most equitable and efficient means to that noble end.

Dr. Hotchkiss is Chairman of the Board of Trustees of the American Medical Association and has been President of The Medical Society of Virginia. Address correspondence to him at 2147 Old Greenbrier Road, Chesapeake VA 23320.

**U**NTIL 1949, all state medical societies were "unified" with the AMA in the sense that all of their members were considered to be members of the

AMA. In 1950 the AMA created a dues-paying membership. In response, several state medical societies adopted a policy of unified membership with the AMA within the context of a dues-paying requirement for AMA membership.

By 1962, 13 state medical societies were thus unified, and their membership accounted for approximately 40% of the AMA's year-end 1962 membership. The AMA's physician membership market share was 73.8%.

Today, only four state medical societies (Illinois, Oklahoma, Kansas and Mississippi), a handful of county medical societies in non-unified states, and one national medical specialty society (the American Association of Clinical Urologists) are unified. As of year-end 1983, AMA members through these societies accounted for approximately 9% of the AMA's membership, and the AMA's physician membership market share was approximately 44.9%, nearly 30 percentage points lower than it was 20 years earlier, at the height of unified membership.

Without question, this marked decline in the percentage of physicians who support the AMA through membership has diminished the AMA's ability to represent the profession. I submit that rather than organized medicine, what we have today is disorganized medicine. This is a situation we can ill afford.

**T**HERE is an alternative, as physicians in Illinois, Oklahoma, and now Kansas and Mississippi have shown. The American Dental Association has

also provided an example; the ADA enjoys unified membership with all state dental societies, and its membership is extremely high compared with physician membership in the AMA.

Recognizing the need for professional unity, the AMA's House of Delegates adopted a report of the Board of Trustees which created a number of new benefits to unified societies and for state societies and their members. The new advantages of unification include:

- A 10% discount on AMA dues for members of unified societies. For full-dues payers in 1985, this amounts to \$33. The rebate recognizes the special support members of unified societies give the AMA.
- Postponement for one year of the \$45 dues increase adopted by AMA delegates at their June meeting, a saving both to those who already are AMA members and to those who join under unification.
- Two extra delegates from unified state societies in the AMA House of Delegates. As a result of

**O**pinion articles constitute a substantial segment of the material published in VIRGINIA MEDICAL. Whose views do these opinions represent? Whose views should they represent? These questions were discussed at length at a recent meeting of the Editorial Board. Although it was agreed that VIRGINIA MEDICAL is the official organ of The Medical Society of Virginia and as such promotes the official positions taken by the Society, no conclusion was reached as to the expression of individual opinions.

A statement: All articles published in VIRGINIA MEDICAL are signed, and the opinions represent those of the authors. VIRGINIA MEDICAL takes no official position in regard to these. Moreover, when a major issue arises, an attempt is made to provide space for advocates of various views. The proposal for unified membership is a case in point.

—E. L. K., Jr.

this provision, members of unified societies receive better and more influential representation in the formulation of national policies.

- An AMA "ombudsman" for members of unified societies. This ombudsman is a special staff person at the AMA with specific responsibility for answering inquiries, fulfilling requests and addressing problems for members of unified states. The ombudsman is accessible only to members of unified societies.

- Increased reimbursement to unified state societies for collection of AMA dues. This increased revenue to the state society helps it keep dues low for its members.

- The services of AMA staff are offered to unified societies for special, mutually agreeable projects. This provision can help a unified society carry out the will of its members with the support of the AMA's highly professional staff.

- A Unified Society Advisory Committee. This body consists of representatives from all unified so-

cieties. It is to meet with the Executive Committee of the AMA Board of Trustees and the Executive Vice President to share the special concerns of unified societies with the AMA.

- A special briefing for the officers of unified societies to inform them of the important activities which the AMA is conducting on behalf of their members.

**T**HUS there are now significant advantages to unified state societies. There are also many tangible benefits to the individual AMA members, including scientific and socioeconomic publications, discounts on AMA products and such services as group insurance programs, and a lengthy list of other benefits.

The more important perspective for the individual and the state medical society is less tangible but far more essential to the purpose of organized medicine. Now, more than ever, we need to unite.

Physicians and their patients are engaged in an unprecedented strug-

gle to save the American way of health care. The stakes are enormous. For the patient, freedom of choice and access to the highest quality of care at an affordable cost are in the balance. For physicians, the choices are clear. Will medicine remain a profession or simply become a trade? Will we be free to practice medicine according to our best medical judgment or will we be subject to economic dictates in our medical decisions?

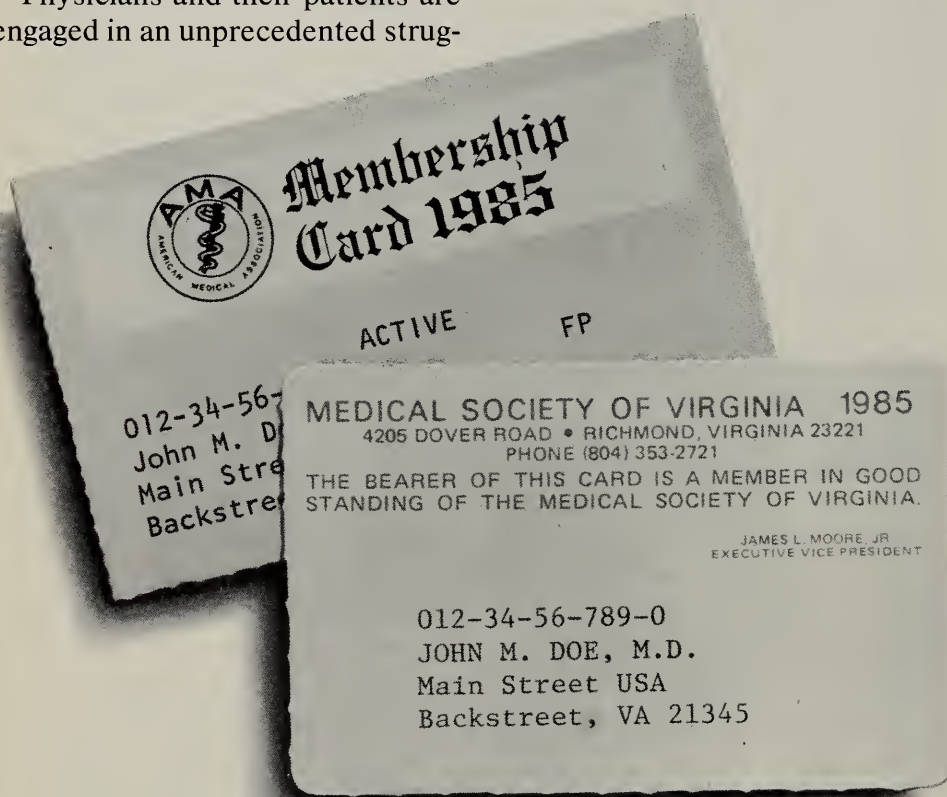
The question of cost of medical care is at the heart of the current challenges to American medicine. Federal cutbacks in health care funding, the high cost of medical liability insurance, and tightening of health care expenditures by business and industry are among the principal factors underlying the intense cost concern that dominates debates over health care.

Physicians are the principal advocates of quality in these discussions. Many of the decisions concerning cost and quality are being

made by the federal government. Virtually all of them are affected by the public opinion environment. A strong national physician voice is essential if the advocacy of quality is to be successful. I feel the American Medical Association is the best vehicle for us to impact on the federal government and on the public. To make the AMA the best organization it can be, the active support of all physicians is crucial. Unified membership is the best way to achieve the unity we so desperately need.

While the need for unity is clearer than ever and the incentives to unify are more compelling than ever, the debate over the merits of unification rings familiar. The rhetoric surrounding this issue often involves indications that we need the AMA or the AMA needs us. The truth is that we need each other. Physicians must join together in supporting the only organization which can credibly represent us if we are to have any hope of preserving what is valuable in American medicine.

**U**PON examination, I am confident that all physicians will see they need a strong AMA. This includes young physicians and their more senior colleagues, male and female physicians, physicians in practice and their counterparts in research and teaching, US and foreign graduates. Cuts in federal funding and expenditures by third-party payers and others in the business community affect each and every one of us, threatening our livelihood and the welfare of our patients. The activities of the AMA on behalf of all physicians, both non-member and member, are too numerous to list exhaustively, but here are just a few:



• Representation of the profession and the public in Washington DC is one of the most important functions of the AMA. Only the AMA can speak for all physicians, regardless of specialty or type of practice, with authority. We do not win all our battles, but we win more than you ever hear about. We successfully defeated mandatory assignment. We defeated legalization of heroin.

• The Keogh bill has been available for only a little over 20 years. I practiced for a number of years with no available way to tax-defer any of my earnings. The AMA lobbied for several years to get the Keogh bill passed, and this alone has been worth more to practicing physicians than all the dues one would pay in a lifetime.

• About eight years later, AMA lobbying was successful in obtaining the right of the practicing physician to incorporate. This improved the capability of the physician to tax-defer earnings in later life. The incorporation privileges have really made it possible for a physician to put enough money aside to retire, and not have to work to his or her dying days; far too few physicians appreciate or even are aware that it was the AMA which made this possible.

• The AMA has engaged in well-founded litigation involving the Federal Trade Commission and the Department of Health and Human Services in relation to Medicare provisions of the Deficit Reduction Act of 1984, which created two classes of physician ("participating" and "non-participating"), and, in the Wilk case, with the chiropractors. Litigation is an expensive remedy and is not universally successful. I wonder how

many lawsuits could be avoided if more physicians joined the AMA and supported our representational efforts. The enhancement of those efforts might enable us to defeat onerous legislation before it becomes law and necessitates expensive court challenges.

The important thing to realize here is that new and more odious legislation is constantly being proposed, and the AMA, with its Council on Legislation, of which Virginia's Percy Wootton is now a member, studies and makes recommendations for policy on every proposed law that affects medical care and the medical profession.

• Professional liability is surely one of the biggest problems if not the biggest facing the profession. It threatens our economic survival. The AMA is extremely active on this and has been for years. Many tort reforms passed or introduced in any state legislative body came from the AMA's Office of General Counsel. Currently, two active AMA committees are addressing the liability problem. One is a committee of the House of Delegates, and one is a committee of the senior staff of the AMA and is chaired by James H. Sammons, MD, Executive Vice President of the AMA. It has made several recommendations which constitute a logical, active approach to the problem.

• The AMA plays an integral role in medical education. The AMA is an essential component of the uniquely American system of accreditation and monitoring of medical education and residency training. It is represented on the Accreditation Council for Continuing Medical Education (formerly the Liaison Committee for CME), which evaluates and accredits medical schools at periodic intervals. The AMA also participates in the residency review committees

which accredit residency programs for training. The AMA's Council on Medical Education studies matters pertaining to medical education activities and makes reports and recommendations to the AMA on this activity.

Harsh times may require harsh words. With all due respect, I ask those who are members of The Medical Society of Virginia but not the AMA, Which of the above activities would you like the AMA to discontinue? I remind you that the MSV delegates you send to the AMA make its policies and that I represent the views of MSV members on the AMA's Board of Trustees. Thus, I feel it is more than likely that if you support the policies of The Medical Society of Virginia you also support the positions of the AMA.

Then, again with all due respect, I ask you to consider this: That by not supporting the AMA through your membership, you are forcing your fellow MSV members to carry your share of the financial load of AMA activities which benefit all of us.

Unified membership is the surest route to an equitable distribution of the cost of the AMA among our members. That cost is well worth the expense, as AMA members demonstrate through their continued support.

**L**ET me briefly address some of the commonly raised concerns about unification.

The myth: Unified membership will hurt Medical Society of Virginia membership.

The reality: Over 65% of physicians in Illinois are members of the Illinois State Medical Society.

Nearly 80% of physicians in Oklahoma are members of the Oklahoma State Medical Association. (For Kansas and Mississippi, newly come to unified membership, figures are not yet available.) In addition, Virginia physicians who are now "direct" AMA members, i.e., they do not belong to The Medical Society of Virginia, would have to join the Society in order to retain their AMA membership if the Society unified.

The myth: Unified membership is illegal.

The reality: Illinois, Oklahoma, Kansas, the other unified county and specialty societies, and the American Dental Association testify to the fact that unified membership is perfectly within the law.

The myth: Unified membership creates a "closed shop."

The reality: If The Medical Society of Virginia unified, it would remain what it is today, a voluntary professional association. No physician is required to join in order to be licensed or obtain hospital privileges. What would change is the current situation which allows physicians to join only one or two of the three integral parts of organized medicine: the county society, the state society, and the AMA. To me, this makes no more sense than allowing one to be a citizen of Virginia without being a citizen of the United States.

**T**HE 1980s have not been a pleasant decade for physicians. Change is in the air, much of it contrary to our best medical judgement. We would face a tough struggle even if we were ideally organized. Sadly, we are not. I feel now is the time for courageous, bold action. We need to close ranks and achieve the dis-

cipline which is prerequisite to real strength. If we are to change the direction of health care, we must change ourselves.

We will have an opportunity to change organized medicine in Virginia for the better at this year's annual meeting, at which the House of Delegates of The Medical Society of Virginia will consider unified membership. There is plenty of time for debate, and I am sure

that plenty of debate will ensue. When the issue of freedom comes into play, think about its real meaning. The real freedom at issue in my mind is our freedom to treat our patients in the way we were trained. Whether we retain that freedom is largely dependent on whether we agree to stand united in the face of unprecedented challenges to the integrity of medicine.

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## DUNCAN S. OWEN, JR.:

### "They feel organized medicine has little to offer them."

**W**E physicians who grew up, went to school, and started our practices in the "good old days" had different problems to face than does the present generation. For example, we had competition, but we didn't experience the fear that many of our college undergraduates have expressed over the past decade. Medical school was hard (and it continues to be hard). A strange thing happened in some schools in the late 1960s and early 1970s. Many students changed from being pragmatic to idealistic and even "radical". (It is most interesting to talk to these "radical" physicians now. The majority of them speak of maturing over the subsequent years, and many have become pragmatists.) However, their postgraduate years were fairly standard, and during this period family practice residencies proliferated. Medical school tuitions and fees were increasing, but monies at low interest rates were available. The "radicals" started housestaff strikes at some

places because of low salaries. There were increases in salaries from those of paupers to those sometimes greater than one would make in the first year or so in practice. The "good life" had begun. Marriages proliferated during the housestaff years. Practice opportunities were plentiful. The good old fee-for-service was still going in the mid-seventies and interference from Uncle Sam was not too strong, notwithstanding Medicare, which went into effect in 1966. Just about everyone joined local and state medical societies and the AMA.

Since the mid-seventies, we have had numerous events that have had a tremendous influence on our practice of medicine. The technical advances have been astronomical, and along with these advances

have come the associated huge costs of medical care. Residents began to subspecialize in high-cost diagnostic and therapeutic areas. Medical costs continued to rise along with the high cost of going to medical school. Then the federal government and, later, private business came in and began to institute the cost-cutting measures we all know too well. Associated with this has been a glut of physicians, too many hospital beds, and a nauseating proliferation of medical malpractice suits, many of which seem to have no merit but are associated with huge awards. On top of this, students were finding themselves in debt in the tens of thousands of dollars, sometimes \$100,000 or more. Practice opportunities began to decline. HMOs began to proliferate. They promised a modest salary, paid malpractice insurance, paid vacation, and many free nights and weekends.

Our students and young physicians are looking at the future. They see the chaos in medicine today. They also wonder why organized medicine has "allowed" us to get into such a situation. "Can't the AMA do something about this? Why should I join an organization that has allowed Washington to create such a catastrophe? And they can't do anything to correct it!" It is hard for me to answer this. I have questions myself. Just how effective is the AMA? I receive brochures periodically, telling me what I receive for the dues I pay. That's really not enough to answer my questions. We in academic medicine see a drastic decrease in federal funds for the postgraduate training of physicians. Has the AMA tried to rectify this? Not to my knowledge. If they have, let's hear about it so that I can have some ammunition to use for my residents and colleagues. Many in an academic setting feel the AMA

is trying to be everything to everybody, which I don't think it can.

Anyway, the students and housestaff see us older practitioners developing anxiety, depression and paranoia, some more than others. They feel organized medicine has little to offer them. I believe they are wrong. However,

when they see the light, it may be too late.

Dr. Owen is a member of The Medical Society of Virginia and the American Medical Association. Address correspondence to him at Box 647, MCV Station, Richmond VA 23298.

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## RICHARD L. FIELDS:

### "It's the single strongest voice physicians have"

**I**N 1985 one of the most important issues confronting The Medical Society of Virginia and its members will be unified membership. What is it? Quite simply, if The Medical Society of Virginia votes for unified membership all members of The Medical Society of Virginia must be members of the American Medical Association. Mandatory AMA membership? Not exactly, but if a physician chooses to join or retain his or her membership in The Medical Society of Virginia he or she must also be a member of the AMA.

Why unification? The advantages of unification far outweigh any disadvantages. First of all, the strengthening of the AMA through increased memberships and addi-

tional dues income could not come at a more vital time for American medicine. There is probably not a physician in Virginia who has not been confronted with the Medicare fee freeze (likely to be extended for at least another year); DRGs relative to hospital costs and, if the federal government has its way, soon to be applied to physicians' fees; preadmission certification for Medicare and Medicaid patients; limitations on nursing home and home health care; federally mandated infringement by non-medical health care providers; and numerous other currently effected and proposed changes that are deleterious to good medical care in the United States. The AMA is the single strongest voice that physicians have to oppose and offer meaningful alternatives to this continual federal tinkering with a

Dr. Fields is Speaker of the Medical Society of Virginia's House of Delegates and is a member of the American Medical Association. Address correspondence to him at 8316 Arlington Boulevard, Fairfax VA 22031.

health care system that, though not perfect, is a model for the rest of the world. I am convinced that a government that can dismantle the best telephone system in the name of "fairness and competition" can also, unchecked, do the same to health care!

I am well aware of many physicians' prejudices against the AMA. In many instances they are totally unfounded and based on misinformation or, even worse, no information; in others they involve isolated or narrow issues with no regard for the broader picture. A careful analysis would reveal that for every physician in the United States, the positive aspects of the AMA's performance exceed by far the few negatives that some individual physicians perceive.

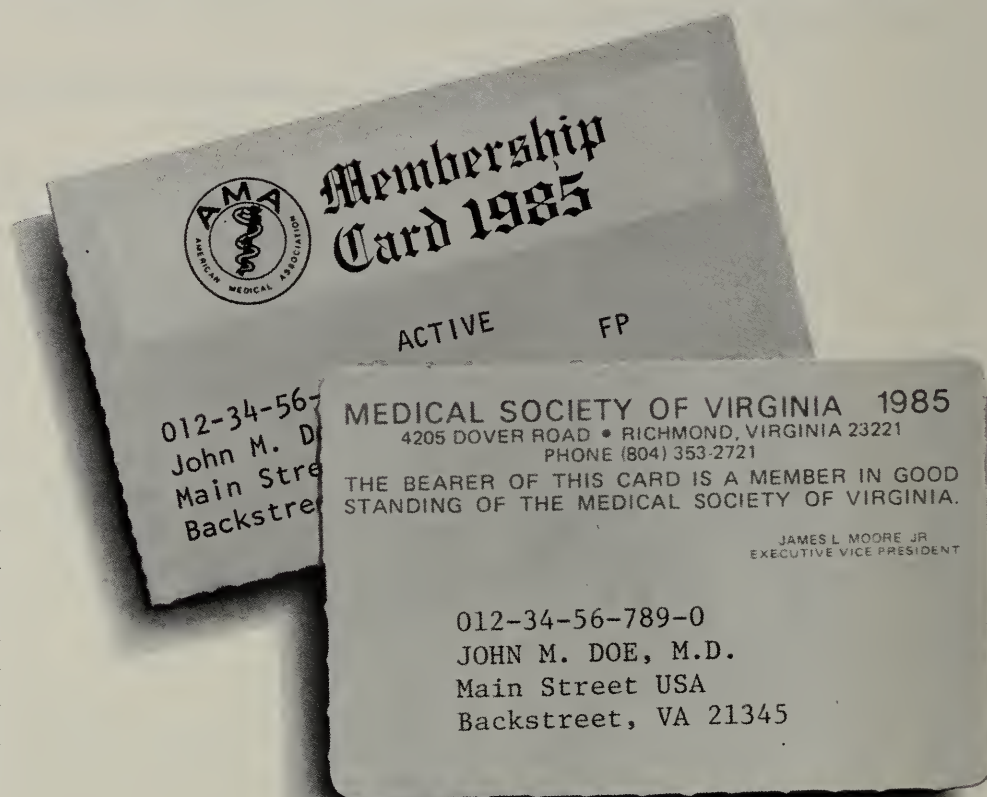
What are the additional benefits of unified membership? As background, until 1949 all state medical societies were unified in the sense that all of their members were members of the AMA. In 1950 the AMA created a dues-paying membership, and, in response, several state medical societies adopted a policy of unified membership with the AMA within the context of a dues-paying requirement for AMA membership. By 1962, thirteen state medical societies were still unified, accounting for approximately 40% of the AMA's membership, and at that time 73.8% of the physicians in the United States were AMA members. Today, four state medical societies, three county medical societies in non-unified states, and one national specialty society are unified. As of year-end 1983, they accounted for 9% of the AMA's membership, and 44.9% of the American physicians belong to the AMA. What does this mean? First of all, for whatever reasons, 55% of American physicians, as opposed to 26% in 1962, have chosen not to join and support the

AMA. Does it mean things are better now than they were in 1962? I doubt it! Does it mean that the majority of physicians see no future threat to our medical system? If they do, they are deluding themselves. Since the benefits of AMA activities accrue equally to members and non-members, 45% of American physicians are financially supporting efforts on behalf of themselves *and* the other 55%. That doesn't seem fair, even disregarding the time, effort, sacrifice, and personal expenditures of those physicians working in Medical Society of Virginia and AMA activities.

to The Medical Society of Virginia on a percentage basis for collection of AMA dues. 4) Expansion of services by AMA staff to The Medical Society of Virginia for various special projects.

Exactly ten years ago I expressed an opinion in the VIRGINIA MEDICAL MONTHLY on the subject of AMA membership (1975;102: 536-537). What we write for publication often comes back to haunt us. In this case I am happy to say that my words then are equally germane today, and the urgency of the issue is even greater.

At the annual meeting in November our House of Delegates will



Unified membership would bring immediately to Virginia the following additional benefits: 1) Two additional AMA delegates to represent The Medical Society of Virginia. 2) A 10% reduction in AMA dues for all members (further reductions would likely occur when other states become unified and AMA membership increases). 3) Additional direct reimbursement

vote on this most vital issue. I urge all members to study the matter carefully and make their views and wishes known to their delegates and district councilors. Most of the leaders in The Medical Society of Virginia feel that the time for unification has come, but they want it to be an expression of the will of the membership.

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## CHARLES L. COOKE:

### "We run a great risk of losing members."

**T**HE American Medical Association is making a concerted effort on behalf of unified membership in medical societies at three levels: local society, state society, and the American Medical Association. The AMA can indeed offer some very convincing evidence to support this idea. Some of these ideas are both philosophical and practical. It is true that medicine needs a unified voice, particularly on the national level, if we are to deal with issues now facing us in Congress.

There are, however, some difficulties with this position and I believe it would be a mistake to adopt such a position at the present time.

First of all, to join the Richmond Academy of Medicine, The Medical Society of Virginia, and the American Medical Association under unified membership at current membership fees would cost \$742 per year. We currently are faced with an oversupply of physicians, and salaries are dropping. This is particularly true of those individuals who have just completed training, due largely to a general tendency for student indebtedness to have increased tremendously over the past few years. Many of these individuals are under great financial strain and would quite naturally look for ways to cut expenses. I'm afraid that a unified membership costing that much money would be one of the first things to go. In short, it seems to me that we run a

great risk of losing members at the level of local and state medical societies if the plan is adopted.

Much has been made over the fact that when New York unified its membership in the early 1960s, state medical society membership increased. Also, when it deunified the fees nine years later, state medical society membership dropped. While this decline is a historic fact, I do not believe that circumstances today are analogous to those during the sixties. We must remember that this era was a time of great dissatisfaction with all of the institutions of society and that people dropped memberships in many organizations, not just medical societies. We don't have nearly as much "anti-establishment bias" in the 1980s as we had then. This probably helps account for changes noted in New York.

There is another reason for opposing unified membership fees. It makes the American Medical Association far more responsible to the needs of physicians if it must solicit their membership rather than being automatically assured of it. At one time, the American Medical Association was editorialized as being the most rigid, mossbacked, reactionary organization in the country. In recent years it has done a great deal to change this image and has provided new services and new public education programs which were not available in the past. This has done a great deal to improve the image of the organization and to make it of far greater value to the physician. In short, if the organization has to work to convince members to join it will certainly be more responsive to the needs of the profession, the patients, and to the public in general.

Dr. Cooke is a member of The Medical Society of Virginia and the American Medical Association. Address correspondence to him at the McGuire Clinic, 7702 Parham Road, Richmond VA 23229.

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## JOHN A. OWEN, JR./ OSCAR A. THORUP, JR.:

### "The decision should be made by the entire membership."

**T**HE issue of unified membership is a critical one, perhaps the most critical to be faced by Virginia physicians in over a decade. Clearly, in the best of all possible worlds every physician

should gladly choose to become an active member of his component medical society, and of The Medical Society of Virginia, and of the AMA. Indeed, in these troublesome times the rationale for doing

## From Legal Counsel, the Ground Rules

**A**t the annual meeting of The Medical Society of Virginia in November the question whether membership in the Society should be contingent on membership in the American Medical Association will be considered. We have been asked to set forth the ground rules under which that important issue will be considered.

Any requirement of unified membership would involve amendments of the Society's articles of incorporation and bylaws. The proposed amendments will be considered by Council at its meeting in September. At that time Council can approve the proposed amendments and recommend their adoption by the House of Delegates. Alternatively, Council can determine to present the question to a vote of the entire membership of the Society at the annual meeting. If Council elects to put the issue to the general membership, at the annual meeting the House of Delegates still would have to find that the question of unified membership is of sufficient importance to require a vote of the general membership (such a finding only requires the approval of a majority of votes cast in the House).

If Council elects to present the issue to the general membership, it also can decide, subject to ratification by a majority of the votes cast in the House of Delegates, that the question of unified membership is of sufficient importance to the Society that proxy voting should be permitted. If Council makes such a determination, proxy forms would be prepared by the staff of the Society and distributed to the membership for return to Society headquarters at least 72 hours prior to the meeting of the

membership. No proxy voting is permitted except in accordance with the foregoing procedures.

If Council elects not to put the question of unified membership to the general membership, the House of Delegates, by majority vote, could decide to put the issue to the general membership, but the meeting of the general membership could not be held until at least 25 days after the meeting of the House of Delegates, since the membership must be given at least 25 days notice of the meeting. If the House did call such a meeting, it also could elect to permit proxy voting in accordance with the procedures set forth above. If the issue is voted on by the general membership, approval would require the affirmative vote of more than two-thirds of those present in person or, if permitted, by proxy.

Alternatively, the House of Delegates can decide that the issue of unified membership should be determined by the House rather than the general membership. In that event, the amendments of the articles of incorporation to provide for unified membership will be adopted if they receive the affirmative vote of more than two-thirds of the votes cast by the members of the House present and entitled to vote on the amendments. Proxy voting is not permitted in the House of Delegates.

Any vote on the amendments in the House of Delegates or at a meeting of the general membership would be conducted in the manner provided by the chair (presumably a voice vote or a show of hands) unless a majority of those present adopt a motion to vote by secret ballot.

—ALLEN C. GOOLSBY, III

so becomes more compelling every day.

We ourselves cannot imagine *not* belonging to all three organizations. But many can. We disagree with their position, but we stoutly defend their right to disagree. It was in fact an attempt to secure that right that prompted the proxy fight by the Albemarle County Medical Society which defeated an attempt in 1976 (in the House of Delegates) to mandate unified membership.

Today, with the advantages of

unified membership even more evident than in 1976, we strongly support the concept and will gladly advocate such a course of action—BUT only provided that the ultimate decision is made by the entire membership, using a mail-in ballot. Article 7 of the Society's Articles of Incorporation sets forth the mechanism for proxy voting, which in truly democratic fashion entitles each member to one vote. We can think of no more appropriate issue to be resolved in this fashion.

What we would oppose, unalter-

ably, is a decision by the House of Delegates *not* to seek a subsequent mail ballot in the event unified membership is approved by the House itself. Indeed, we suspect that delegates will wish to be assured that there *will be* a subsequent mail ballot before casting their vote on such an issue in the House of Delegates.

The *American Medical News* of May 17, 1985, reported that the delegates of the Kansas Medical Society recently voted to unify membership with the AMA by a

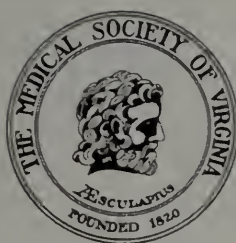
vote of 115 to 5. The article went on to say that the delegates will now attempt to convince the membership that this action was the correct one. This seems to us to be putting the cart before the horse.

What we urge is (as already planned) a statewide educational/promotional campaign to persuade all members of The Medical Society of Virginia that unified membership is, in the long run, to their best advantage. This will naturally be followed by lively discussions in component medical societies, from which delegates will come to the annual meeting at the Homestead on November 7 to decide the issue. If the House adopts these amendments to the Articles and to the Bylaws, we feel it should take the next logical step of calling a general meeting, with proxy voting permitted. Mail ballots would be sent to every member of the Society requesting a yea or nay vote on the question; actual physical attendance would be unnecessary. Thus the general membership becomes the final court of appeal.

Anything less is unworthy of the democratic traditions and character of this medical society, and breaks faith with the great Virginian who once said,

"I know of no safe depository of the ultimate powers of the Society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them but to inform their discretion by education."

Dr. Owen is 7th District Councilor for The Medical Society of Virginia and a member of the American Medical Association. Dr. Thorup is a member of The Medical Society of Virginia and the American Medical Association. Address correspondence to Dr. Owen at Colthurst Farm, Charlottesville VA 22901.



# The Medical Society of Virginia

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James L. Moore, Jr., <i>Executive Vice President</i>	



# Grand Rounds: Management of Theophylline Toxicity

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From the Medical College of Virginia/Virginia Commonwealth University.  
Case Presentation by Alan Rothman, MD.  
Discussion by Curtis N. Sessler, MD.

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## PRESENTATION OF CASE

DR. ALAN ROTHMAN: W. S., a 45-year-old man, was brought to the Medical College of Virginia emergency room with a theophylline overdose. He had become despondent over marital problems, consumed a large quantity of alcohol, and ingested approximately 30 300-mg anhydrous theophylline sustained action (Theodur®) tablets. In the emergency room he complained only of nausea and nervousness. Past medical history was remarkable only for intermittent alcohol abuse. There was no history of heart failure, liver disease, or obstructive lung disease. He was taking no prescribed medications, having ingested his mother-in-law's Theodur tablets.

Examination in the emergency room revealed a blood pressure of 120/70 mmHg, pulse of 146/min, respirations of 32/min, and temperature of 99.4°F. The lungs were clear to auscultation and the cardiac examination revealed tachycardia and a II/VI sys-

toic flow murmur. Bowel sounds were diminished and mild hepatomegaly was present. The patient was alert and oriented, but appeared agitated. The neurologic examination was unremarkable except for a tremor.

Admission laboratory data included a white blood cell count of 13,400/ $\mu$ l with a normal differential, hemoglobin of 16.9 gm/dl and platelet count of 290,000/ $\mu$ l. Serum electrolytes were sodium 145 mEq/L, chloride 107 mEq/L, potassium 2.5 mEq/L, bicarbonate 16 mEq/L, glucose 167 mg/dl, BUN 10 mg/dl, and calcium 8.1 mg/dl. Liver enzymes were normal. The initial theophylline level was 79.8  $\mu$ g/ml. The ethanol level was 1950 mg/l. The electrocardiogram revealed sinus tachycardia. The chest radiograph was normal.

Treatment in the emergency room included the administration of ipecac, which produced vomiting. Pill fragments were noted in the vomitus. A nasogastric tube was placed and gastric lavage performed. Oral activated charcoal was administered but was vomited immediately. The patient was admitted to the medical intensive care unit where a second theophylline concentration was 91.5  $\mu$ g/ml. Oral activated charcoal was again administered per nasogastric tube and vomited. Charcoal hemoperfusion was initiated because the patient remained

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Presented 12-4-84.

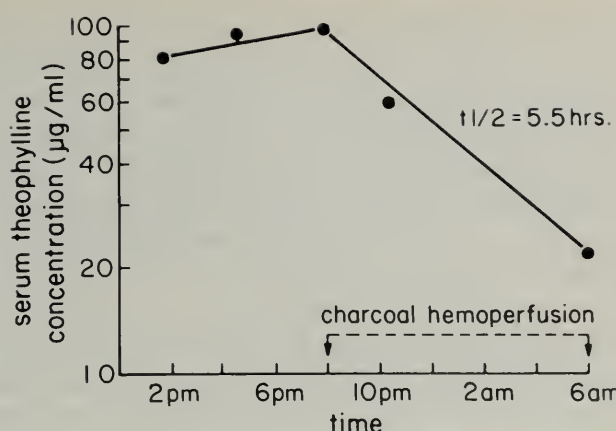
symptomatic, had evidence of continued absorption of the sustained release theophylline, and was unable to tolerate oral charcoal. A third theophylline concentration obtained at the onset of hemoperfusion was 94.8  $\mu\text{g/ml}$  (Fig. 1). Despite some initial difficulties with clotting of the charcoal filters, the theophylline concentration decreased to 23.8  $\mu\text{g/ml}$  after 10 hours of hemoperfusion. Nausea, agitation and tremor resolved and the heart rate slowed. With charcoal hemoperfusion, the platelet count fell to a nadir of 43,000/ $\mu\text{l}$ , the hemoglobin decreased by 6 grams to 10.9 gm/dl, and the calcium fell to 6.4 mg/dl. These values were normal by the time of discharge. Following psychiatric evaluation, the patient was discharged in good health.

## DISCUSSION

**DR. CURTIS SESSLER:** This case illustrates some of the more common manifestations of theophylline toxicity.

Theophylline has been widely used in the treatment of asthma for over 50 years and continues to be among the most frequently prescribed bronchodilators.<sup>1</sup> The bronchodilator effect is proportional to the serum theophylline concentration with a therapeutic range of 10-20  $\mu\text{g/ml}$ .<sup>2</sup> Minor side effects such as nausea, tachycardia and tremor are common when the serum theophylline concentration exceeds 20  $\mu\text{g/ml}$  and are almost uniformly present with concentrations greater than 30  $\mu\text{g/ml}$ .<sup>3,4</sup> Potentially life-threatening complications such as tachyarrhythmias, seizures and shock may also occur, usually at concentrations greater than 40  $\mu\text{g/ml}$ .

Theophylline, 1,3- dimethylxanthine, is transformed by hepatic microsomal enzymes to relatively inactive metabolites that are excreted in the urine.<sup>2,5</sup> (2.5). Only 15% of theophylline is excreted in the urine unchanged. The rate of metabolism is highly variable among normal individuals. In addition, a number of disorders, medications and other factors are known to inhibit theophylline metabolism, potentially resulting in toxicity (Table 1).<sup>1,2</sup> However, the most common cause of toxicity is human error. Patient error, usually the result of accidentally exceeding the prescribed dose, was the most frequent cause identified in two recent series.<sup>6,7</sup> Perhaps more importantly, physician error was a major factor in the development of toxicity in over one-quarter of patients (Table 2). Frequent monitoring of serum theophylline concentrations and patient education regarding the appropriate use and the toxic manifestations of theophylline is essential.



**Fig. 1.** Serum theophylline concentrations plotted in a logarithmic fashion versus time. Charcoal hemoperfusion was performed from 8 pm to 6 am.

**Table 1. Factors Known to Impair Theophylline Metabolism**

Liver dysfunction
Congestive heart failure
Cor pulmonale
Infection (viral illness, pneumonia)
Advanced age, infancy
Medications: cimetidine, erythromycin, allopurinol, propranolol, oral contraceptives

**Table 2. Factors Responsible for Theophylline Toxicity in 36 Patients (by Percent of Patients)<sup>6,7</sup>**

	Sessler <sup>6</sup>	Mountain <sup>7</sup>
Patient error	50*	59
Physician error	29	27
Intentional overdose	21	excluded
Drug interaction	0	14
Heart failure	29	9
Liver disease	7	14
Age >70	21	18
Total number of patients	14	22

**Table 3. Signs and Symptoms of Theophylline Toxicity in 81 Patients<sup>3,6,7</sup>**

	% of Patients
Tachycardia	81
Nausea	70
Vomiting	53
Tremor	31
Agitation	30
Abdominal pain	16
Seizures	9
Lethargy/confusion	7
Hypotension/shock	5

Nausea and vomiting are present in the majority of cases (Table 3). Abdominal pain may be severe and mimic acute pancreatitis.<sup>8</sup> Nervousness and agitation are commonly reported by toxic patients and tremor is often present. Varying degrees of disorientation and impaired consciousness, including frank coma, have been described.

Seizures are among the most feared complica-

tions of theophylline toxicity and are associated with a mortality rate of nearly 50%.<sup>7,9-11</sup> Typically, seizures occur with theophylline concentrations in excess of 40 µg/ml; however, they have been reported with levels as low as 25 µg/ml.<sup>9</sup> Seizures often appear abruptly without preceding minor symptoms such as nausea or nervousness.<sup>9</sup> Progression to status epilepticus is, unfortunately, common and difficult to manage.

The positive chronotropic and arrhythmogenic effects of excessive levels of theophylline are well documented.<sup>6,7,12</sup> The electrocardiogram typically reveals sinus tachycardia; however, frequent premature ventricular contractions or rapid tachyarrhythmias may be present (Table 4). Hypotension, which can progress to complete cardiovascular collapse, may develop.

Metabolic abnormalities are not uncommon. In one recent series,<sup>13</sup> hypokalemia was present in all 22 patients who had intentionally ingested an overdose of theophylline. Other laboratory abnormalities included mild hyperglycemia, leukocytosis, respiratory alkalosis, hypophosphatemia and hypomagnesemia.

## Management

Appropriate management involves preventing and/or treating the complications of toxicity while reducing the serum theophylline concentration (Table 5). The approach is dependent upon several factors: the theophylline preparation, time of ingestion, whether the overdose was intentional, and the severity of the toxicity as judged by serum theophylline levels and symptoms.

Recently there has been interest in two techniques to remove circulating theophylline, accelerating the reduction in the theophylline concentration and speeding recovery from toxicity: orally administered activated charcoal and charcoal hemoperfusion.

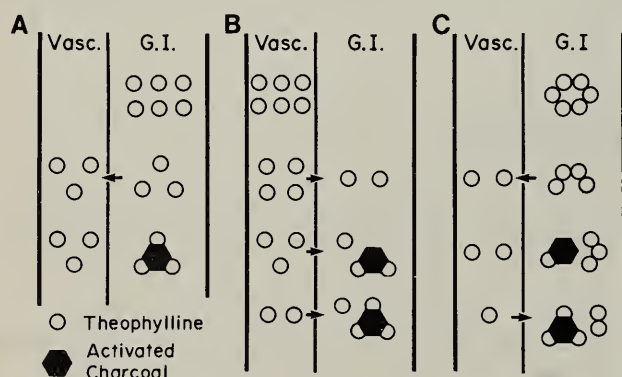


Fig. 2. Effect of oral activated charcoal on A, plain aminophylline tablets; B, intravenous aminophylline; and C, sustained-release theophylline tablets.

Table 4. Electrocardiographic Findings in 36 Theophylline-Toxic Patients<sup>6,7</sup>

	% of Patients
Sinus rhythm	11
Sinus tachycardia	72
Premature ventricular contractions	17
Multifocal atrial tachycardia	8
Paroxysmal supraventricular tachycardia	8
Ventricular tachycardia	3
Atrial fibrillation	3

Table 5. Techniques/Indications for Management of Theophylline Toxicity

Discontinue medication:
All cases, particularly for IV aminophylline
Gastric lavage, emesis:
Intentional overdose, perhaps with other recent oral ingestion
Oral activated charcoal:
All cases,* particularly for sustained release theophylline
Charcoal hemoperfusion:
1. Serum theophylline level > 60 µg/ml (4 hours after theophylline ingestion)
2. Serum theophylline level > 30 µg/ml and three of following four risk factors:
a. Age > 60 years
b. Significant liver disease and/or congestive heart failure
c. Theophylline half-life > 24 hours
d. Theophylline level > 50 µg/ml (11)

\* If serum theophylline level exceeds 50 µg/ml, likelihood of vomiting oral charcoal is high; thus airway protection must be ensured if patient is obtunded<sup>6</sup>.

**Oral activated charcoal.** Oral activated charcoal (OAC) has been available for many years as an antidote for drug intoxications and poisonings.<sup>14</sup> It is readily available, simple to administer, inexpensive and safe. OAC reduces the serum theophylline concentration by two mechanisms. First, OAC binds ingested but still unabsorbed theophylline in the gastrointestinal tract, preventing further absorption (Fig. 2A).<sup>15</sup> Secondly, OAC enhances the clearance of theophylline from the circulation. The gastrointestinal tract has a rich vascular network. Theophylline diffuses down the concentration gradient from the bloodstream to the gastrointestinal fluids. There it is bound by OAC, changing the concentration gradient and allowing further diffusion of theophylline (Fig. 2B). This phenomenon has been called "gastrointestinal dialysis".<sup>16</sup>

OAC may be particularly effective for sustained release (SR) theophylline preparations. Unlike plain aminophylline tablets, which are usually 90% absorbed within two hours of ingestion, SR products are frequently only 50% absorbed 5 hours after ingestion.<sup>17</sup> Thus administration of OAC even hours after ingestion of the last dose of SR-theophylline may prevent further absorption of the drug.

In addition, circulating theophylline is removed by "gastrointestinal dialysis" (Fig. 2C).

Both impaired absorption<sup>15</sup> and enhanced clearance<sup>18,19</sup> have been demonstrated in normal subjects. Likewise, more rapid theophylline clearance and resolution of symptoms has been demonstrated in toxic patients treated with OAC.<sup>6,20-22</sup> No adverse effects of OAC were described in any of these reports.

In most clinical trials, 20-30-gram doses of OAC were administered every two hours until the serum theophylline concentration decreased into the normal range. OAC mixed in tap water forms a slurry which is drunk or administered per nasogastric tube. Rapid administration should be avoided as it may produce vomiting.<sup>23</sup> Flavorings such as sorbitol, sugar, saccharine and chocolate may be added without significantly reducing the adsorptive properties.<sup>14</sup> A cathartic should be administered with the OAC to enhance removal of the charcoal-drug combination from the gut.<sup>24</sup> Sorbitol added to OAC offers the advantage of palatability plus cathartic action and this combination is available commercially.<sup>25</sup>

Despite the high incidence of nausea and vomiting among theophylline toxic patients, most tolerate oral activated charcoal. In a recent report, however, all four toxic patients with serum theophylline levels greater than 50 µg/ml vomited OAC while the ten patients with levels of 30-50 µg/ml tolerated the OAC.<sup>6</sup>

*Charcoal hemoperfusion.* Hemoperfusion is a modified form of hemodialysis in which blood is in direct contact with an adsorbent material such as activated charcoal or a resin, allowing enhanced clearance of a toxin or drug.<sup>26</sup> This technique is significantly more efficient than hemodialysis<sup>27</sup> or peritoneal dialysis<sup>28</sup> for the removal of theophylline<sup>6,10,11,29,30</sup> and a variety of other drugs.<sup>31</sup>

This technique has a number of limitations. Most importantly, charcoal hemoperfusion is not available in many hospitals. It requires the use of specialized equipment and trained personnel, thus is quite expensive. It is an invasive technique which requires vascular access and has been associated with thrombocytopenia, anemia, hypocalcemia and hypotension.<sup>32</sup> Finally, there is some argument whether mortality is actually decreased.<sup>10,34</sup> There are reports of survival from severe theophylline intoxication without charcoal hemoperfusion.<sup>7,10,33</sup> Nevertheless, most experts agree that charcoal hemoperfusion is indicated for patients at high risk for developing severe complications such as seizures, shock and tachyarrhythmias. Park et al<sup>11</sup>

have proposed guidelines regarding the indications for charcoal hemoperfusion (Table 5).

Continued absorption of theophylline from sustained-release products may cause a rebound in the drug concentration to toxic levels when hemoperfusion is stopped.<sup>34</sup> When tolerated, oral activated charcoal will prevent this rebound.

### Summary

Theophylline toxicity is not uncommon and probably will become more frequent with the continued use of sustained-release preparations. Prevention of toxicity through patient education, physician awareness of predisposing factors, and monitoring of serum theophylline levels is of utmost importance. Management of the theophylline toxic patient should be individualized. Patients with theophylline toxicity of moderate severity should be treated with oral activated charcoal, a safe, readily available and inexpensive substance. Charcoal hemoperfusion should be strongly considered for patients at high risk of developing severe toxic complications.

The author thanks Drs. Frederick L. Glauser and Kevin R. Cooper for their helpful suggestions in the preparation of this manuscript.

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## VIRGINIA AUTHORS

**Catheter-Associated Bacteriuria.** Robert L. Thompson, MD, *Seattle, Washington*; Charles E. Haley, MD; Mary Ann Searcy, RN; Sharon M. Geunthner, MT; Donald L. Kaiser, DrPH; Dieter H. M. Gröschel, MD; Jay Y. Gillenwater, MD; Richard P. Wenzel, MD, *Charlottesville*.

We assessed the efficacy of periodic instillations of hydrogen peroxide into urinary drainage systems in the prevention of catheter-associated bacteriuria in a prospective and randomized clinical study of 668 patients with indwelling urethral catheters. Bacteriuria was documented in 68 (10%) of the 668 patients after a mean duration of four days of catheterization. There was no difference between the hydrogen peroxide group and

the control group in the mean duration of catheterization before the onset of bacteriuria, in the attack rate for bacteriuria, or in the spectrum of etiologic agents recovered. Bag contamination with the same organism responsible for bacteriuria preceded infection in only five (7%) of the 68 patients, three patients using hydrogen peroxide and two in the control group. We conclude that infections arising intraluminally from contamination of the drainage bag are uncommon among catheterized patients and that the periodic instillation of disinfectants into closed sterile drainage systems is not effective in reducing the incidence of catheter-associated bacteriuria. *JAMA* 1984;251:747-751

## Cancer Trends: To Treat or Not to Treat?

As a national consensus conference approaches, oncologist Gerald Goldstein, MD, *Charlottesville*, interviews himself on troubling aspects of adjuvant chemotherapy in breast cancer.

**DR. GOLDSTEIN ASKS: What are you mumbling about now?**

**DR. GOLDSTEIN ANSWERS:** Women with breast cancer after they have had the primary in the breast treated. To treat or not to treat with adjuvant chemotherapy, that is getting to be the question.

**Q: What seems to be the problem?**

**A:** A hitherto quiet battle is shaping up into a public, emotional confrontation when a consensus conference on adjuvant chemotherapy of breast cancer is held this coming September. To illustrate, we have such statements as "Surgical adjuvant chemotherapy has been a great disappointment only if you believe in magic", or "Is aggressive adjuvant chemotherapy the Halstead radical of the eighties?"

The Cancer Trends series appears under the editorship of Dr. Goldstein, Dr. J. Shelton Horsley, III, and Dr. Anas M. El-Mahdi. It is sponsored by the Professional Education Committee, Virginia Division, American Cancer Society.

Address correspondence to Dr. Goldstein at Box 527, University of Virginia Blue Ridge Hospital, Charlottesville VA 22901.

Submitted 3-11-85.

**Q: What is your problem with this question?**

**A:** My brain seems to have two emotional centers and a residual intellectual center. This makes me see very clearly the reasons to give adjuvant therapy and the reasons not to give adjuvant therapy.

**Q: What is the purpose of making your confusion public?**

**A:** I would like to create a demand for presentation of the data in a uniform manner so that individuals can come to their conclusions from a base of data rather than from an interpretation of undisclosed or incompletely revealed information.

**Q: Perhaps it would be best to let every reader know what you mean by adjuvant chemotherapy in breast cancer?**

**A:** Adjuvant chemotherapy in breast cancer means giving chemotherapy to a group of patients who have no objective evidence that the breast cancer has spread but are all at risk for the presence of metastases. This means that some who do not need treatment are treated in order to add to the cure rate of those whose cancer had spread from the breast and regionally treated area. If this approach is to be of value, it should be established that there are

more survivors in a group so treated than in a group who received treatment only when the cancer has actually recurred.

**Q: How are the studies carried out?**

A: The concept is not new, and there are many old studies of perioperative therapy, i.e., a few days of chemotherapy plus or minus radiation. The modern era was ushered in by studies of the National Surgical Adjuvant Breast Project and the Instituto Nazionale Tumori in Milano, Italy. These initial studies were designed to determine both the success and failure rates of adjuvant chemotherapy.

**Q: I understand what you mean by the failure rate, but I would assume that those who didn't fail were successes. Why a separate success rate?**

A: Let's look at a group of premenopausal women with one to three positive nodes, some of whom received phenylalanine mustard and some of whom received a placebo. At nine years, about 80% of the L-PAM group and about 50% of the placebo group are alive. One could calculate that the success rate is 30%, not 80%, since 50% of the group may not have needed the treatment.

The first set of studies separated patients into four groups based on age or menstrual status and number of positive nodes, one to three positive, or more than three positive. In the Milan study, chemotherapy was with cyclophosphamide, methotrexate and 5-fluorouracil.

**Q: The results?**

A: Detailed and complete results as printed in the NSABP Progress Reports are a model of how the results should be reported. The number of patients in each subset; the year-by-year, disease-free survival; the year-by-year survival; and the complications are presented.

In Table 1, results from both studies are shown as approximate percentage of nine-year survivors. Only one subset—premenopausal women with one to three positive nodes—had a significantly improved survival. It is noteworthy that in this subset, for every ten women treated, about two have died and about five did not need chemotherapy at the time of surgery. Surprisingly, the more intensive Italian regimen showed no greater advantage than phenylalanine mustard.

**Q: Any other comments about Table 1?**

**Table 1. Survival in Adjuvant Chemotherapy for Breast Cancer by Percentage at 9 and [8]\* Years**

Subset	NSABP			Milano	
	Placebo	L-PAM	[L-PAM]	Control	CMF
Premenopausal					
1-3+ nodes	~50	~80	~[70]	49	78
>3+ nodes	~30	~50	~[35]	33	44
Postmenopausal					
1-3+ nodes	~65	~65	~[70]	58	55
>3+ nodes	~30	~25	~[30]	47	42

\* Part of next study.

A: Benevolent haste may create waste. In the early analyses of the results of these two studies, it appeared that adjuvant chemotherapy was of proven value for women with node-positive breast cancer. At that early time, the question in need of answer was what is the best combination of drugs that should be used. Almost all subsequent clinical trials discarded an untreated group and proceeded to compare the effectiveness of different treatment regimens: one drug vs two drugs; two vs three; five vs one; sequential combinations; six months of treatment vs 12 months; and others.

**Q: Well, what is wrong with that approach?**

A: The major difficulty can be grasped from looking at the eight-year results in Table 1. There is no untreated group. At eight years, 30% of the L-PAM premenopausal group have failed, compared to 20% failure at nine years in the previous study. We have no legitimate untreated group for determining the success rate. If we use the previous control group (placebo in Table 1), we could hazard a guess that five people did not need treatment, three people failed, and there were two successes.

**Q: But surely if the results are good, wouldn't it be obvious?**

A: Finding meaningful published reports of results is frustrating. Nevertheless, if one plots the results of the initial NSABP study and plots the other results on the same graph, no major improvements can be seen. It appears as though all the survival points are close together.

What we need at the consensus meeting is the presentation of complete, year-by-year results of survival and disease-free survival of each subset in the original and subsequent studies. In addition, the significant side effects should be presented.

**Q: Will presenting the data bring a uniformity of opinion about the use of adjuvant chemotherapy?**

A: No, but it will provide some basis for informed consent whereby a patient will have an understanding of the failure rate and possibly some understanding of the success rate. Different physicians and different patients will come to different conclusions about the benefits and risks of treatment.

**Q: What seems to be happening in the design of the clinical trials?**

A: It appears as though everyone sees a need to improve the results. The route selected seems to be one predicated on the premise that failure to cure micrometastases is due to resistance of cancer cells to chemotherapy; therefore more intensive treatment combinations are needed. Looking at the results, I wonder if other rationales for resistance should be considered. To mention a few, inadequate and inhomogenous blood supply to micrometastases, i.e., the cancer cells are in a hardened silo. Heterogeneity of cancer cells with regard to cell cycle. Even a trade-off is possible, when some cells that are killed provide building blocks to rescue other cancer cells in the micrometastasis.

**Q: What do you recommend for the future?**

A: We need a well-designed study with an untreated group and a group that will receive what is perceived to be the most active treatment combination.

**Q: What do you mean by "well-designed"?**

A: The latest information on prognostic groups should be used to stratify the patients into subsets. This means using the size of the tumor, the histology, the presence or absence of hormone receptors, the nodal status 1-3, 4-6, 6-10, greater than 10.

**Q: Hey, this would require an enormous study!**

A: Yes, we would have to stop thinking of breast cancer as a common disease and think of each subset as being uncommon. Then we could have one national—or international, if possible—intergroup study to obtain adequate numbers in a reasonable time.

**Q: You think this is necessary?**

A: Yes, I fear that the issue is being presented to the public in such a highly emotional tone that we may have to forfeit a useful approach unless we rigorously prove its value.

## VIRGINIA AUTHORS

**Carcinoma of the Duodenum.** Michael Gaddy, MD, and Martin H. Max, MD, *Norfolk*.

Primary duodenal carcinoma is an uncommon tumor that tends to be diagnosed late in its course because of a symptom complex compatible with many benign diseases. We reviewed the cases of five patients with duodenal adenocarcinoma treated at Norfolk General Hospital from 1973 to 1983. Periapillary tumors were excluded. The most common symptom, nausea and vomiting, was present in four patients, all of whom had microcytic anemia; in three, tests showed blood in stool specimens. The upper gastrointestinal series was suggestive of carcinoma in all patients. One of the lesions was proximal to the ampulla, while the other four were in

the third and fourth portions of the duodenum. Only three of the lesions could be seen on upper GI endoscopy, and in only one of the three was the biopsy specimen positive for malignancy. At laparotomy, two patients had resectable lesions, but only segmental resection was done. Three patients had unresectable disease because of liver metastases and/or involvement of the root of the small bowel mesentery. Because delay in diagnosis of duodenal carcinoma may prevent successful resection, greater awareness of the possibility of these uncommon lesions, along with aggressive diagnostic workup, may result in a higher percentage of cures. *South Med J* 1985;78:150-152

# VIRGINIA MEDICAL OBITUARY

## **S. C. Boyce, MD**

Dr. Stanley Carlton Boyce, Sr., Colonial Heights, died May 3 at the age of 58.

A native Virginian, Dr. Boyce was born in Winchester and completed his undergraduate studies and his medical schooling at the University of Virginia, then trained in Denver, Colorado. By specialty a general practitioner, he was at the time of his death regional medical director of the Allied Corporation's fibers plants in the Hopewell and Petersburg areas and advisor to the Virginia Occupational Health Nurses Association. Dr. Boyce had been a member of The Medical Society of Virginia for almost 30 years and belonged also to the Southside Medical Society and the Virginia Occupational Medicine Association.

## **Paul E. Zehfuss, MD**

Dr. Paul E. Zehfuss, Alexandria ophthalmologist, died following a stroke on May 22 at a hospital in Tucson, where he was attending a golf tournament. He was 76.

Born in Pittsburgh, Pennsylvania, Dr. Zehfuss earned both undergraduate and medical degrees at the University of Pittsburgh, then trained at hospitals in Pennsylvania, Alexandria and Washington DC. He entered the Army during World War II and saw service in the China-Burma-India theater. Dr. Zehfuss first practiced in Washington but in 1967 transferred his offices to Alexandria and joined the Alexandria Medical Society and The Medical Society of Virginia. He belonged also to the District of Columbia Medical Society and the American Association of Ophthalmology.

## **Tapan Hazra, MD**

Dr. Tapan A. Hazra, Richmond, 48, died June 5 in Louisville, Kentucky, where he had traveled as an examiner for the American Board of Radiology. He was chairman of the Division of Radiation Therapy and Oncology at the Medical College of Virginia.

Born in India, Dr. Hazra received his medical degree from the University of Bombay and trained

in this country at the Washington DC Hospital Center. Before coming to Richmond in 1976, he was acting director of the Division of Radiotherapy at Johns Hopkins University. A specialist in cancer of the prostate and breast, he was recently appointed by Gov. Charles S. Robb to a legislative study group on breast cancer.

Dr. Hazra was a fellow of the Royal College of Physicians in Edinburgh and a member of the Royal College of Radiology in London. His memberships in this country included the American College of Physicians, the American Society of Therapeutic Radiology, the American College of Radiology, and the American Radium Society. He was the founder of the Susruta Society of Radiology, an organization of radiologists of Indian origin.

## **Douglas L. Marshall, MD**

Dr. Douglas Lyle Marshall, Winchester, died unexpectedly on March 3 after suffering a heart attack while vacationing in Florida. He was 38 years old. A graduate of the Medical College of Virginia, Dr. Marshall trained at Norfolk General Hospital. He was director of the emergency room at Winchester Memorial Hospital.

## **Priscilla Oliver, MD**

Dr. Priscilla Foote Oliver, family physician and wife of Keith M. Oliver, MD, died of cancer at the family home, "Hillside," near Leesburg on February 28. She was 65 years old.

Born in Patterson, New Jersey, Dr. Foote was graduated from Vassar College, then went to the University of Rochester for her medical degree. Her marriage to Dr. Oliver took her to Loudoun County in 1948. There she reared six children and contributed tirelessly to community endeavors. Her volunteer work encompassed the Loudoun County Health Department, as a clinician for maternal child health and as a member of the advisory board of the Mental Health Center; the Loudoun Valley Community Center, as a longtime member of the board of directors; and St. Peter's Episcopal Church, as a member of the vestry and activities chairman. She also initiated Loudoun County's first Girl Scout

troop and from 1966 to 1971 was a director of the national Girl Scout Council.

## Memoir of Paul Camp 1903-1984

*By William T. Tucker, MD, Percy Wootton, MD,  
and Thomas N. P. Johns, MD*

Paul Douglas Camp, Jr., died at his home in Richmond on September 22, 1984, after a long illness. He had continued his usual activities following his retirement in 1978 until shortly before his death.

Dr. Camp was born in Franklin, Southampton County, Virginia, on May 6, 1903. He graduated from Virginia Military Institute in 1924 and from the University of Virginia School of Medicine in 1928. He interned at Roosevelt Hospital in New York and subsequently was a Dalton fellow and cardiac resident at Massachusetts General Hospital under Dr. Paul D. White. Following his training he went abroad and worked as a voluntary research worker under Sir Thomas Lewis at the Medical Research Clinic, University College Hospital and Medical School, in London, then went to Vienna and trained under Dr. David Scherf. He returned to Richmond and established a private practice of cardiology in 1934.

Dr. Camp was an assistant professor of medicine at the Medical College of Virginia and from 1934 to 1969 was director of MCV's outpatient cardiac clinic. He held appointments at MCV, Johnston-Willis, Richmond Memorial, Stuart Circle, St. Luke's and Retreat for the Sick hospitals.

He served on the board of directors of Johnston-Willis Hospital, Union Camp Corporation, and Gill Country Day School, and was chairman of the board of Medical Associates of Richmond, Inc.

Dr. Camp was involved in teaching and research in his practice and was either author or coauthor of some 30 papers involving various areas of cardiovascular disease, including rheumatic fever, heart failure and hypertension. His studies of serum cholesterol in conjunction with MCV's Department of Biochemistry led to several papers related to cholesterol abnormalities in cardiovascular disease.

He was a member of numerous medical societies, including the Richmond Academy of Medicine, The Medical Society of Virginia, and the American Medical Association. Dr. Camp was president of the Richmond Area and Virginia Heart Associations, and was a member of the board of directors of

the American Heart Association. He was a diplomate of the American Board of Internal Medicine and fellow of the American College of Physicians and of the American College of Cardiology.

He was an active member of the River Road Baptist Church and contributed to its growth and service to the community. Dr. Camp enjoyed life outside of his practice and was a charter member of the Deep Run Hunt Club and rode until the final year of his life.

He was a loyal friend to all who were fortunate enough to fall within his areas of activity. In particular, he was a devoted physician who spent many long hours with his patients in earlier years when little but the physician and his skills were available for their survival.

He is survived by his wife, Nellie Staves Camp, two children and two grandchildren.

## Memoir of J. W. Houck 1906-1984

*By Joseph L. Platt, MD,  
R. F. Hawkins, MD, and P. R. Bryan, MD*

Dr. Joseph William Houck, 78, of Lynchburg, died September 10, 1984, in Virginia Baptist Hospital. He had retired after 50 years as a surgeon.

Born in Harrisonburg, he was a son of the late Joseph Thomas and Elizabeth Summerson Houck and husband of Katherine Kemp Houck. He was a graduate of Cornell University and the University of Virginia School of Medicine, where he was Phi Beta Kappa and a member of Sigma Xi.

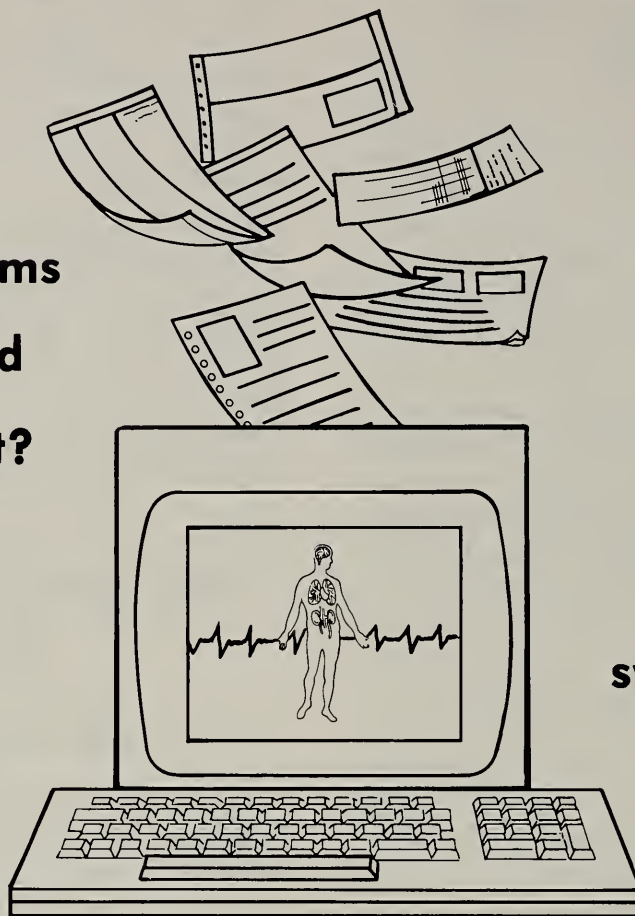
Joe was a veteran of World War II with the rank of navy commander and a member of St. Paul's Episcopal Church. He found time to develop and operate an old farm and received an award as Tree Farmer of the Year. Kitty and Joe entertained at their farm near Forest and gave their children and friends many happy hours of hunting, swimming and fishing. Joe also developed a herd of prize Angus cattle.

Throughout a prolonged terminal illness, Joe was supported by his devoted wife and their four sons: Joseph K. Houck, Kansas City, Kansas; Peter W. Houck, MD, and Leighton S. Houck, Lynchburg; and Thomas L. Houck, Forest. He is also survived by a sister and 12 grandchildren.

For those of us who shared the pleasures and benefits of his friendship and the countless others his life touched, we say, "Thanks for a course well run."

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## COMING ATTRACTION

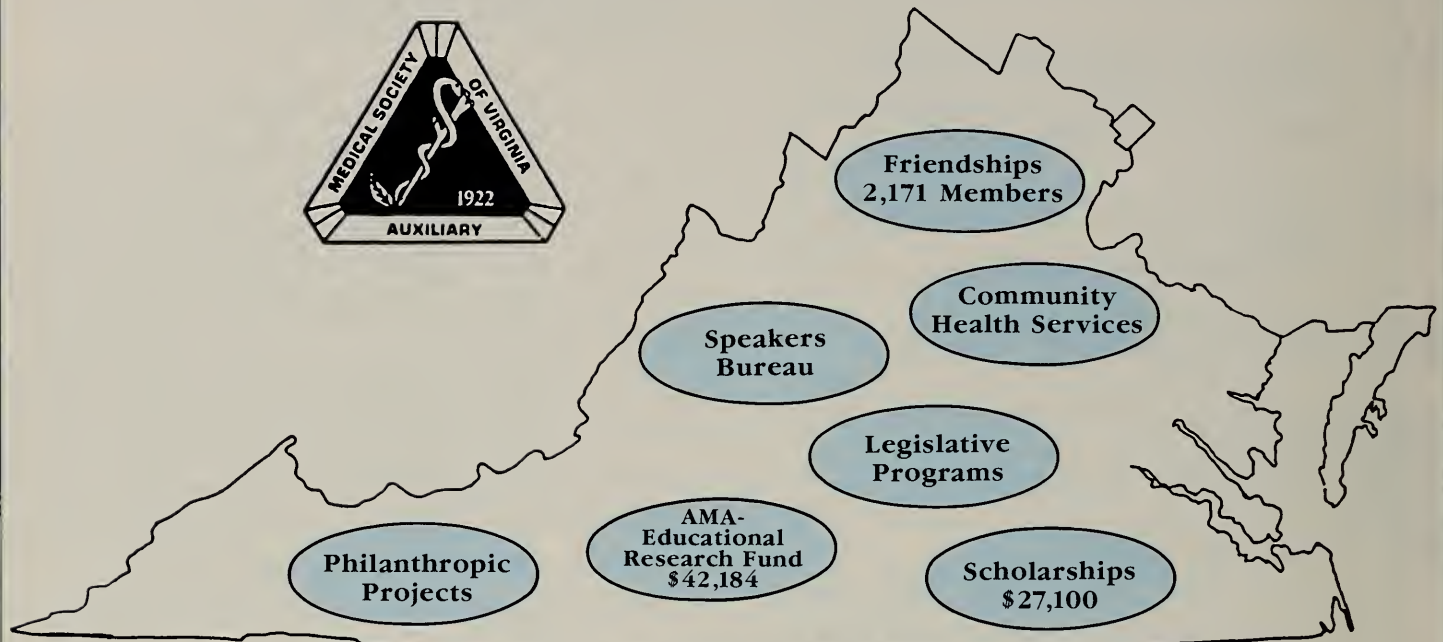
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Each year VIRGINIA MEDICAL's October issue brings you the program for The Medical Society of Virginia's annual meeting and the annual reports of committees. This year the issue highlights a prime concern of the Cancer Committee, colorectal cancer, including text by Daniel M. Gelfman and Alvin M. Zfass, and an informational brochure you can order free of charge for distribution to your patients.

Scheduled for November: The candid account of the deterioration of an entire family when an adolescent son gets hung up on drugs, by Larry Jenny and Richard H. Schwartz; an economist's view of the medical liability situation in Virginia, by Robert W. Cook, Jr.; and an original article on hypertension, by David W. Richardson.

# Do You Know...

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More than ever before our Auxiliary needs to increase its membership, unite, and commit its assistance to the medical profession in response to these adverse changes affecting our medical environment.

The strength of any organization is in its membership, both paid active members and paid inactive members. We need your personal commitment now. You can help influence the future direction of medicine in our communities. To show your support, please ask your spouse to fill out and return the form below.

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# LETTERS

## Coverage at odds with new outpatient emphasis

In an effort to cut medical costs, increasing emphasis is being placed on outpatient surgery, and we are required to do some procedures as outpatients unless there are complications. A number of Medicare patients carry supplementary insurance to make up the deficit and cover their deductibles. One of my patients was recently told by a large insurance company that they would not honor her policy unless she was admitted for a cataract operation. We are no longer allowed to admit cataract patients for surgery. The insurance policy is worthless to the patient for this procedure.

It is in the best interest of our patients, ourselves, the government and the insurance companies that hospital costs and medical costs be kept to a bare minimum consistent with good care. I feel that it would be well for The Medical Society of Virginia, through its appropriate committees, to approach the insurance companies to have them change their policies, which these people are carrying to supplement their Medicare coverage.

**Junius E. Crowgey, MD**

707 South Jefferson Street  
Roanoke VA 24008

**Editors' Note:** Dr. Crowgey's letter was referred to the State Corporation Commission's Bureau of Insurance, and this response was received from Anthony P. Smith, senior consumer service representative, Consumer Service Section, Life and Health Division:

"I am unable to respond by stating the Bureau of Insurance will at this time begin efforts to change the minimum standards for Medicare supplement policies to include outpatient care. However, I believe that we will be able to possibly begin the process of developing information to support such a change if we can receive sufficient information to document the problem. If it would be possible to have Dr. Crowgey forward the specific details, including the identity of the insured, the insurance company and the policy number, we would be glad to look into the matter and determine why other

claims could not be paid. If you have other such cases, you can forward those to us also."

Should you wish to add a complaint to Dr. Crowgey's, address Mr. Smith at the Bureau of Insurance, Box 1157, Richmond VA 23209.

## Of unified membership, Mencken, and marketing

Just when I thought I had retired from the fields of political valor the issue of "unified membership" forces me back into action. It is with a profound sense of regret that I now find the leadership of The Medical Society of Virginia resurrecting a long-dead issue, a dragon slain while I was in the infancy of my political career. This is déjà vu at its worst.

First, let us get rid of the euphemism "unified membership," and call it what it really is, *forced membership*. At issue is not whether unity or the AMA are good, bad or indifferent, but whether we have the right to force our peers to join an organization which they do not wish to be members of. If an individual fails to join the AMA because he or she does not comprehend what the organization does or because of neglect or laziness, this can be easily corrected by further education and better marketing of the organization. Otherwise the rationale for forced membership is quite simple: The leadership of the Medical Society wishes to *impose its judgment and will* on some of its members, presumably because it is felt that this judgment is superior to that of the affected members. I find that intellectually insulting, and for a group of individuals who seem in most other respects very interested in preserving our basic American freedoms, quite incongruous. Perhaps, to paraphrase H. L. Mencken, the morality of the MSV leadership is curiously aligned with its self-interest.

The real tragedy of forced membership is that it has the potential to do the exact opposite of that which it purports, namely be divisive rather than unifying. I am not certain that I would wish to remain a member of an organization which forced me to join another organization against my will. Thus, let me propose to the present leadership of

the MSV that rather than pursuing the folly of "unified membership," they try to do a better job of marketing AMA membership to those MSV members who do not yet belong and put "unified membership" back in the grave where it truly belongs.

**Paul G. Rochmis, MD**

3027 Javier Road  
Fairfax VA 22031

**Editors' Note:** Dr. Rochmis is a member of The Medical Society of Virginia and the American Medical Association and has been president of the Fairfax County Medical Society.

The reader is referred to VIRGINIA MEDICAL's August issue, which was being printed when Dr. Rochmis' letter was received and which featured the viewpoints on unified membership of six Medical Society of Virginia members.

## MEDICARE DO'S AND DON'TS

If you're thinking of changing your Medicare provider status when the contract year ends on September 30, be sure you've checked out the latest rules and regs before taking action. The Health Care Financing Administration has been cogitating over provisos dealing with payments, charges, and the freezing thereof, and by the time this issue reaches you, you should have received notice of any changes that will apply beginning October 1. The person responsible for notifying you is David J. Latham, associate manager, Medicare B Claims, the Travelers.

If, after studying the new protocol, you want to shift from par to non-par, you must make formal, written notification of the change before October 1; otherwise, says the law, "the contract will be renewed automatically."

Send your notification to Mr. Latham at PO Box 26463, Richmond VA 23261.

## MSV STAFF DIRECTORY



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# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

### RECIPROCAL OPENS LIABILITY BOOKS FOR HOUSE SUBCOMMITTEE

At the request of the Joint Subcommittee to Study Medical Malpractice Laws established during its 1984 session by Virginia's General Assembly (HJR 209), the Virginia Insurance Reciprocal, a medical professional liability insurer of hospitals for eight years and of physicians for almost four years, commissioned a study to determine the amount of money paid to patients on closed claims and the legal defense costs of those claims. Fifty-four physician claims and 445 hospital claims were analyzed. The purpose was 1) to determine whether the cost of claims is increasing in Virginia and 2) what part of the total payments went to the injured patients. The analysis was limited to all closed claims, whether settled or litigated, whether resolved in favor of plaintiff or of the health care provider. Exhibits were prepared breaking out physician and hospital claims experience.

#### **Both claims paid and defense costs show marked increase**

The study gives support to the view that costs are increasing in Virginia. The average hospital claim payment, exclusive of defense costs, increased 389% from 1981 to 1984, while the average physician claim loss increased 312% over the period 1981-1984.

Legal costs increased as well. The average defense cost per hospital claim increased 318% over the five-year period ending December 1984. Not included in these figures is another \$4 million spent during this period by the Reciprocal for defense costs on claims still pending. Furthermore, the average defense cost per claim paid in the first quarter of 1985 was revealed to be \$35,335, a 1,327% increase over the 1981 average. While this is most likely an aberration, it points up the costly inefficiency of the present advocacy system inherent in tort litigation. The adverse trend in claims losses and defense cost payments reflected in the exhibits, while significant, is somewhat exaggerated by the fact that large cases take longer to resolve, and many of the Reciprocal's large pending claims are not reflected in the figures.

#### **Frequency, severity up, number of MD claims down**

Although not addressed in the exhibits, frequency as well as severity seems to be developing adversely

**THE VIRGINIA INSURANCE RECIPROCAL'S  
MEDICAL PROFESSIONAL LIABILITY LOSS EXPERIENCE**

**Exhibit 1A. Loss and Loss Expense Paid on Closed Physician Claims.**

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1st Qtr 1985</u>
Average paid to patient	\$7,201	\$12,987	\$29,691	\$9,810
Average paid in defense	\$ 690	\$ 5,838	\$ 7,449	\$2,041

**Exhibit 1B. Loss and Loss Expense Paid on Closed Hospital Claims.**

	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1st Qtr 1985</u>
Average paid to patient	\$8,654	\$15,277	\$10,332	\$42,364	\$34,014
Average paid in defense	\$2,476	\$ 4,550	\$ 6,368	\$10,354	\$35,335

**Exhibit 2. Distribution of Loss and Loss Expense, Closed Claims.**

	<u>Physician</u>		<u>Hospital</u>	
	<u>Paid</u>	<u>% of Total</u>	<u>Paid</u>	<u>% of Total</u>
To injured patient	\$ 340,226	31.4	\$ 3,148,147	29.8
Legal/third-party costs	115,500	10.6	1,176,000	11.1
Cost of defense	286,522	26.5	2,832,806	26.8
Plaintiff's counsel fees	210,880	19.5	2,000,941	19.0
Insuror's operating costs	130,000	12.0	1,400,000	13.3
<b>TOTAL</b>	<b>\$1,083,128</b>	<b>100.0%</b>	<b>\$10,557,894</b>	<b>100.0%</b>

in Virginia. While the number of new hospital claims arising per month has remained essentially unchanged in recent years, there was a 31% increase in the first quarter of 1985. On the bright side, the number of claims per 100 physicians insured went from 15.7 in 1984 to 11.8 in 1985.

## **Patient gets less than one-third of claims dollar**

The second purpose of the study was to determine where the dollars paid on closed claims are going. In addition to the payments to patients and legal defense costs incurred in defending or settling these cases, approximately \$1,530,000 was spent to cover the Reciprocal's internal claims operating expenses, bringing the total cost of both physician and hospital claims to \$10,041,022.

While precise statistics are not available, it is estimated that the patient incurs litigation costs of his own for such things as court costs, expert fees, and appeal expenses. It is also assumed that on average, \$2,500 goes to the benefit of third parties to reimburse medical expenses not covered by collateral sources, workers' compensation liens, etc. These costs and assumptions are included in the figures in Exhibit 2.

Only 30% of the total dollars spent goes to the patient in physician claims and 29% in hospital claims. Even if the assumptions are off by 100%, still only 35%-36% of the money spent ends up in the hands of the patients.

## **Tort distribution system shortchanges patients**

In conclusion, the statistics give support to the view that the litigious climate prevailing in medical malpractice today is adding to the medical costs being borne by health care consumers in Virginia and that there is need to streamline the tort distribution system so as to get more of the insurance dollars into the hands of the negligently injured patients more quickly.

**--F. Douglas Wall**

Mr. Wall is vice president of Virginia Professional Underwriters, Inc., attorney in fact for the Virginia Insurance Reciprocal. His office address is 4200 Innslake Drive, Glen Allen VA 23060.

**“The first  
thing we do,  
let’s kill  
all the  
lawyers.”**

— William Shakespeare; Henry the Sixth,  
Part II, Act 4, Scene II



# It's not their fault!

---

Any doctor who has faced the rigors of litigation can tell you how much one longs for a simple solution but we all know it isn't really the lawyers' fault.

Heeding the bard's advice isn't the answer.

Indeed, two years ago the Rand Study on the Frequency and Severity of Medical Malpractice Claims found conclusively that "the number of lawyers per capita has no effect on claim frequency" and went on to point out that, surprisingly, "the single most powerful predictor of claim frequency and severity is urbanization."

Four years ago, six of every hundred doctors nationwide could expect to be sued for malpractice.

In California the rate was a numbing one in five. Last year the rate jumped up to one in four in Florida.

Ten years ago malpractice liability premiums averaged \$1300; last year they averaged over \$4100.

Nationally, the average case reserve was \$35,000 in 1982 but in New York State the average settlement was a staggering \$360,000.

How is a physician supposed to feel when he begins to pay an annual liability insurance premium that is greater than the cost of his medical school education?

The cure is deceptively simple.

The only way to reduce the cost of malpractice liability coverage is to reduce the frequency and severity of liability claims.

The best way to reduce the frequency and severity of liability claims is to actually reduce the frequency and severity of malpractice.

The process of eliminating malpractice involves us all:

First, all health care providers must recognize that the Nurse is the one professional likely to spend the most time with a patient. The nurse's contribution to successful health care delivery is a vital element of a physician's practice and should be rewarded accordingly.

Second, open communication based on mutual trust and confidence is essential between physician and patient. Any physician who neglects this obligation to his practice risks losing it.

Third, continuing education is essential in all professions but paramount for health care providers. Malpractice liability will exist as long as there are advances in medical knowledge that leave some practicing physicians behind.

Fourth, and finally, unskilled claims handling that result in unwarranted settlements will only encourage increased claims frequency in the future. Part of the insurance industry's obligation is to vigorously protect the integrity of the physician and the system in each and every claim.

There are a number of ways to positively practice medicine and avoid malpractice traps in the future.

Two important tips to remember:

1. Don't cover up a colleague's blunder.
2. Take care when reporting negative tests.



For a copy of our booklet "Twenty-Two Tips to Reduce Liability Exposure" write: TVIR, Box 31394, Richmond, Virginia, 23294-1394 or call toll-free 1-800-552-3025.

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*(A message in the public interest presented by The Virginia Insurance Reciprocal, providers of Medical Liability Insurance.)*

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## For "Strange People," a Valuable Guide

**Y**OU'VE come a long way America! The ranks of your joggers and runners have swelled from barely 100,000 in 1968 to over 30 million at the present time. Many millions participate in such other aerobic exercises as biking, swimming, dancing, tennis, and racket ball. Our society is changing from "armchair sports enthusiast" to an actively participating population.

The result? Statistics show that over the past 15 years there has been a significant reduction in incidents of heart attacks and strokes (complications of atherosclerosis). Scientists have demonstrated that an aerobic exercise program decreases or eliminates such well-recognized risk factors as hypertension, obesity, hyperlipidemia, smoking and glucose intolerance. Many people experience strenuous physical activity as the best antidote to the stress created by life in modern civilization. This is the good news.

The bad news is that an aerobic exercise program is not a "cure-all". Even runners die, and about two out of three runners suffer some form of injury each year.

Injuries are caused by static or dynamic malalignment, by training errors, by overuse, and by "wear and tear", especially in the older runner.

In his article "The Injured Runner", Dr. Kulund gives a comprehensive dissertation on skeletal injuries most runners sooner or later will encounter. In the first chapter, he presents an excellent description of the various problems, their symptoms, and how to correct them. The second chapter, outlines the evaluation of the injured athlete. As in any field of medicine, the history and physical examination is the most important part, giving a cor-

rect diagnosis in about 80% of patients. The third and last chapter deals with handling the injured runner and gives valuable treatment suggestions.

Any physician who treats sports injuries should be a good psychologist. Injured runners are "strange people" and patience isn't one of their virtues. One cannot tell a runner to lay off running two or three weeks; he or she will go to the next doctor, or to a podiatrist or chiropractor, or continue to run until completely broken down. It is very important to make the runner an active participant in the treatment and rehabilitation program. In addition to local treatment, the runner has to be directed to compensating exercises and, as outlined by Dr. Kulund, may have to change shoes, orthotics, or alter modes of training. While treating the local injury of the athlete, it is also worthwhile to check pulses, listen for bruits, evaluate the cardiopulmonary system and blood chemistry. Claudication, gout, or rare metabolic diseases, and endocrinopathies can sometimes mimic skeletal injuries. An athlete often will do anything to improve his or her performance and can become susceptible to various fads (diet, vitamins, anabolic steroids, amphetamines). Understanding questioning could solve the puzzling problems.

It may require a little more time by the physician to treat an injured athlete, but a smiling "Thanks, Doc" when he is back on his feet gives a rewarding good feeling. Dr. Kulund's outline is a valuable guide.

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# The Injured Runner

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Running injuries follow predictable patterns based on biomechanical variations. Sometimes an abnormality of stride or bone structure stresses several areas of the body at once; in other cases, injuries develop sequentially. By correcting the biomechanics, current injuries can be cured and later ones prevented. In this three-part article, the author describes the spectrum of running injuries, the techniques for evaluating those injuries, and the joint efforts of physician and patient required for successful treatment and rehabilitation of the injured runner.

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**C**ONSIDERING the forces and twists on the legs in running, it is easy to understand why there are so many running injuries. Many injuries are caused by training errors; many runners are tempted to take on "too much, too fast, too often." An injured runner may have increased training mileage abruptly, started interval work without proper conditioning, changed terrain, or bought new and perhaps inappropriate shoes. On the other hand, many injuries attributed to running are really not running injuries at all. A runner could have twisted a knee rototilling his garden or perhaps developed metatarsalgia by pressing a piano pedal. In these cases running simply accentuates the problem.

Ordinary running can cause injuries all over the body, not just in the legs and feet. A runner who unconsciously clenches his jaw and hikes his shoulders may develop headaches and even shoulder bursitis. The jarring produced when a runner lands may detach a retina, so running may not be a good activity for someone who has had a detached retina or who is extremely near-sighted. Runners who hold small dumbbells while running may suffer deQuervain's tenosynovitis at the wrist. Most running injuries, however, occur from the lower back down.

#### **Lower back injuries:**

A runner may strain the lower back during the follow-through phase of running, by leaning into hills on uphill runs or by leaning back while going downhill (Fig. 1). The best way to run hills is to stay as upright as possible. Runners with back problems should run later in the day because their discs have the greatest volume in the morning and thus are more likely to push on the nerves during a morning run. Disc protrusions are not rare in runners, especially as they increase their pace and over-extend the back. Buttock pain often signals sciatica.

Runners with back trouble should warm up the midsection with trunk rotations and stretch the hamstrings (Fig. 2). A higher heeled shoe or a heel lift is generally helpful. The runner may hang from an inversion device to stretch the back before and after running (Fig. 3).

#### **Pelvic problems**

A runner's arms should swing forward and backward. If they cross, their momentum causes the

midsection to twist. Arm crossing is a particular problem in women runners and can lead to stress fracture of the pelvis and pubic symphysis, especially in women runners doing short intervals on the track. A bone scan can reveal the hot spot. These runners need to train in the pool until the soreness is relieved.

High school students building up to high mileage during growth spurts sometimes suffer iliac apophysitis in the anterior-superior or posterior-superior iliac crest. The condition heals promptly if the runner cuts back on mileage and the intensity of his training.

#### **The hip**

Runners sometimes develop stress fractures in the femoral neck. They feel pain not always in the hip itself but along the inner thigh or at the knee. These fractures are usually in the superior part of the neck. If they break through, the femoral head may then displace, so it is important that runners with this problem stop running. They can stay in shape by doing pool work. A runner with a leg-length inequality may suffer an abductor strain. Women runners with leg-length inequality often develop greater trochanteric bursitis on the long leg side. Both of these conditions respond well to a hydrocortisone injection followed by Tubic exercises for the hip (see box next page).

#### **Hamstrings**

Acute hamstring pulls are seen in sprinters, while chronic hamstring soreness is more common in distance runners. Chronic strain is usually on the runner's short side, the side that has to reach farther for the ground. The pull may be either at the hamstring origin at the ischium or in the body of the muscle. The injured runner should soak in a tub for about 20 minutes every night and massage the injured area with baby oil or lanolin cream. A firm heel lift will take some of the strain off the hamstrings. A 1/4-inch lift may be put inside the shoes under the shock-absorbent foam insert to equalize the disparity between leg lengths, but I think a 3/8-inch heel lift added directly to the midsole does a better job. This adjustment should also be made in the runner's everyday walking shoes. Hamstring injuries often take a long time to heal.

#### **The knee**

The knee joint does not work as a hinge but instead has a gliding swiveling action as it flexes and extends to absorb shock. In fact, the patellofemoral joint absorbs more force than any other joint in the



**Fig. 1.** Overextension of back during follow-through phase of running may produce lower back pain.



**Fig. 3.** Hamstring stretching with sole against opposite thigh reduces pelvic tilt and back stress.



**Fig. 2.** Inversion system allows runner to stretch back.

### **Tubal Calisthenics**

Tubics® is the name of a program of strength-building exercises developed by the author in which the runner uses a lightweight bicycle inner tube 1¼"×27". These exercises yield superior results to exercises using free weights and machines.

In Tubics, the runner can either do many fast repetitions against low resistance or get a general workout by tying a knot in the middle of the tube and securing the tube to a door. The arms are moved back and forth against the resistance of the tube, as in running. Several bouts of 60-70 seconds are equivalent to ¼-mile intervals on the track. These exercises build arm power and endurance without an unwanted increase in bulk.

body. Abnormal mobility of the foot causes increased swiveling of the knee and a sideways slide of the kneecap.

There are many kinds of knee injuries. A runner's iliotibial band moves like a windshield wiper over the lateral epicondyle of the femur, which may cause a bursitis beneath the band and strain of the band itself. The commonest cause of band friction is a worn lateral heel of the shoe on a runner's long leg. Treatment includes adding a lateral heel plate. A high volume local injection can help, too. Anteromedial knee pain is also common, a product of the over-pronation causing medial stress. Orthotics which reduce pronation often relieve the pain.

Retropatellar pain can often be traced to problems distant from the knee area. For example, over-pronation produces increased sideways slide of the patellar and a shearing action at the junction of the articular cartilage and underlying bone. Orthotics decrease the pronation and thus the amount of patellar translation. In addition, an infrapatellar strap sometimes relieves retropatellar pain because it slightly alters the tilt of the kneecap (Fig. 4). This correction is similar to changing saddle height to relieve a cyclist's knee pain.

Pain behind the runner's knee can be caused by a capsular sprain or a hamstring or gastrocnemius strain. The shorter leg usually suffers and may be treated with a heel lift. Pain at the patellar tendon or tibial tubercle may abate with an infrapatellar strap. Tubics and orthotics may help. The tibial tubercle should be x-rayed because there may be a loose piece of bone that may need to be removed.

X-ray films of the knee are important when the runner has had chronic knee pain because there might be a giant cell tumor or other bone lesion.

Knee meniscus tears are rare in runners unless they step in a pothole, swerve to avoid a car, or trip and fall on a cross country course. More commonly, a runner who has a meniscus tear has incurred the original injury playing touch football, squash or soccer. Runners rightly resist open surgery for an internal derangement such as a meniscus tear but are receptive to arthroscopic surgery. This technique has helped many runners return to the roads.

### **Leg and Ankle**

Leg and ankle problems include two kinds of shin splints, stress fractures, medial ankle sprains, lateral ankle jams, extensor tenosynovitis and problems around the Achilles tendon. Posteromedial shin splints are the most common type of shin splint and result from tugs on the fibers that attach muscle to bone (Fig. 5). These stresses are caused by over-pronation. Because flexible shoes contribute to excessive pronation, a runner with this problem should acquire more rigid shoes and orthotics. The runner should also follow a home treatment program, emphasizing massage, and in some cases, a local hydrocortisone shot can help. If none of these methods relieves the soreness, the soleus fascia may be released locally, but orthotics should always be tried first.

Anterior shin splints occur typically in new runners and those who increase their mileage in the spring after running only occasionally in the winter. The role of the anterior tibial muscle is to pull the leg over the foot. A new runner or one just returning to the roads usually has a tight calf and a comparatively weak anterior tibial. The anterior muscles must strain to work against the tight heel cord. Furthermore, if the runner is wearing rigid shoes or plastic orthotics, the foot becomes a lever, and the anterior muscles are over-used. To alleviate these shin splints, the runner should follow a home treatment program, stretch the calves, and do Tubic ankle pulls. The high volume bathing injection as prescribed for some posteromedial shin splints may be helpful. Sometimes a fascial defect and herniation of a small piece of muscle through the fascia produces the anterior problem. This condition is cured simply by opening the fascia.

Another leg problem is the stress fracture, which commonly occurs in two places. One kind, characteristic of runners with high arched feet, occurs in the proximal tibia medially about 2 cms below the flare of the metaphysis. The bone will be tender.

Practitioners sometimes mistake this condition for a pes anserinus bursitis and inject a steroid. However, if oblique x-ray films show a cloud of callus or if a bone scan reveals a hot spot, a stress fracture is likely. Furthermore, a pes anserinus bursitis tends to appear in runners with flexible, over-pronating feet, not with rigid, high-arched feet. Treatment for a tibial stress fracture involves cushioning the foot with new shoes and shock absorbing orthotics.

The second location for stress fractures of the leg is in the distal fibula about 6 cms above the tip of the lateral malleolus. During running, the fibula pistons, shifts and rolls as it bears about one-sixth of a runner's body weight. These movements are accentuated in runners who have flexible feet and lead to injury. The fractures of the fibular are best treated with more rigid shoes and controlling orthotics.

Another problem common to runners with excessive pronation is medial ankle pain. A medial wedge placed under the insole or glued into the midsole or a pair of orthotics helps to alleviate the condition. Lateral ankle jam is another product of over-pronation. Here again, a medial wedge or controlling orthotic is effective. Anterior ankle pain, however, has a different cause. It may be produced by irritation of the extensor tendons as they pass under the extensor retinaculum. Sometimes a heel lift helps cure this condition, because it decreases the angle at which the tendons pass beneath their retinaculum.

Achilles peritendonitis, retrocalcaneal bursitis and Achilles periostitis are mostly seen in sprinters and in distance runners who are forefoot strikers (Fig. 6). These conditions frequently occur when an athlete switches from running shoes to low-heeled tennis shoes and plays tennis while running on the balls of the feet.

An x-ray film should be taken to check for calcium deposits in the Achilles tendon and for a prominent posterosuperior part of the os calcis above the insertion of the Achilles tendon. This "bump" acts like a pulley on the tendon, putting extra strain on it. Tugs of the Achilles tendon may also pull off chips of bone, which then become lodged in it. All of these problems are best treated initially with a home treatment program and a  $\frac{3}{8}$ -inch heel lift. In the flexible foot, controlling orthotics will decrease the windshield wiper action of the Achilles tendon over the bump.

Swelling behind the heel could mean a stress fracture and not an Achilles problem. The symptoms of calcaneal stress fractures are soreness and swelling on the sides of the heel. The bone will also be tender. These fractures are most often seen in



Fig. 4. Infrapatellar strap slightly alters tilt of kneecap.

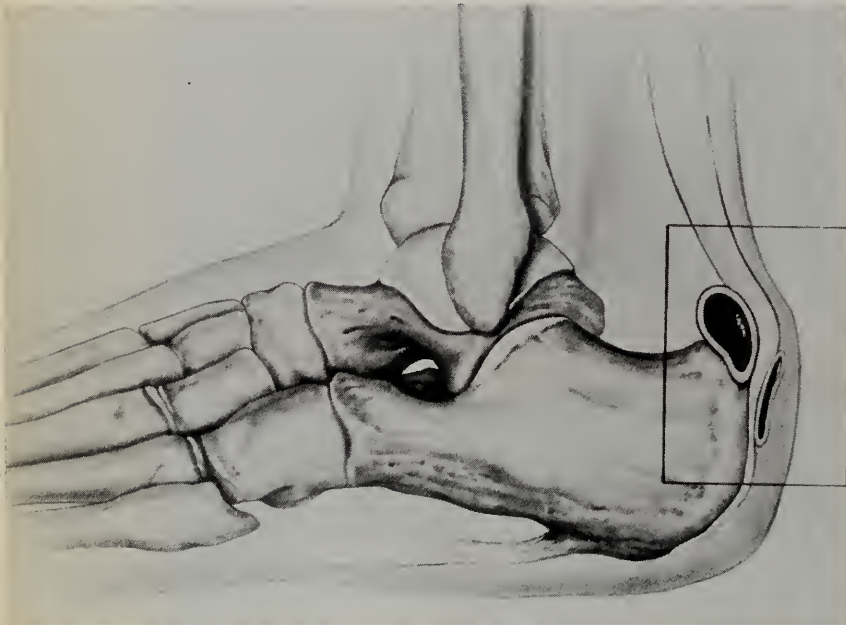


Fig. 5. Shin splints usually occur posteromedial to tibia.

the long calcaneus bone of slim runners and ballet dancers.

### Foot

Heel bruises are not as frequent in runners as one might think because of the good shock absorption in most running shoes. Plastic heel cups or felt "doughnut pads" can protect the heel from impact, but orthotics with deep heel cups are even better. On occasion an x-ray film of the heel may show a heel spur, but these are usually smooth and horizontal. The spurs result from plantar fascial tugs, and there is no need to remove them as they do not



**Fig. 6.** Pain in back of heel may be due to retrocalcaneal bump, Achilles peritendonitis, or subcutaneous or retrocalcaneal bursitis.



**Fig. 7.** Plantar fascia is thick band seen here between abductor hallucis (above) and heel pad (below).

cause irritation. However, the tubercle under the heel where the heel makes contact with the ground varies in shape and may be a source of pain. A sharp tubercle may pinch soft tissue between the bone and the shoe. A doughnut pad usually provides effective relief.

"Plantar fasciitis" is a common problem in runners. The plantar fascia is dense fibrous tissue originating from the calcaneus in a wad about as thick as the thumb (Fig. 7). This tissue spreads out as it makes its way towards the forefoot. Plantar fasciitis pain can be produced by a variety of sources. In runners with high-arched rigid feet and also in those who over-pronate, the fascia itself may be strained. Sometimes the abductor hallucis is strained, which accounts for soreness on the medial side of the foot near the calcaneus. Another contributing factor to plantar fascia pain is pinching of the medial calcaneal nerve as it approaches the heel. This pinching produces a burning calcaneal neuritis. In dissections of the feet, I have also found a strong and sharp deep fascia under the abductor hallucis that can pinch the underlying nerves.

To treat plantar fasciitis I prescribe a home treatment program and orthotics with deep heel cups. Direct injections into the area are not as effective as "back door" shots achieved by placing the needle under the deep fascia of the abductor from above. This method of injection is not very painful and allows the solution to bathe the fascia. In chronic cases not responding to orthotics or an injection, I sometimes release the plantar fascia and the deep fascia of the abductor hallucis and unroof the medial calcaneal nerve.

Some runners, especially those who have high-arched feet, complain of a prominence on the dorsum of the foot. Sometimes their shoes rub on an exostosis in the midfoot, causing a bursitis. In such cases, the tongue of the shoe may be padded to relieve the injured area or the runner can skip an eyelet in the lacing system, thus relieving pressure. Another foot injury is the sprained midtarsal joint. These often occur when a runner changes to more flexible training shoes or racing flats. The midfoot may be sprained when the weather changes and the ground becomes much harder or softer. Tape jobs, straps or orthotics ease these midtarsal sprains.

A navicular bone fracture may also cause midfoot pain. Ordinary x-ray films may not show the fracture, but an oblique x-ray film will line up the navicular and may show the fracture. Sometimes only a bone scan will produce results. A "hot spot" means a cast should be applied. Not all navicular pain, however, is a symptom of a fracture. Some

runners strain a posterior tibial tendon at the insertion into the navicular. This strain is relieved with tape jobs, a strap or orthotics that reduce pronation.

Metatarsalgia refers to pain in the forefoot, and most of these pains are beneath the ball of the foot, under the second or third metatarsal head. This problem is seen especially in older runners because their forefoot splays more than when they were younger. Here, everyday walking shoes are usually at fault. These shoes can be padded with materials such as Aliplast 6<sup>TM</sup>, Spenco<sup>TM</sup>, or Sorbathane<sup>TM</sup>. Orthotics should be used to reduce the splaying. A metatarsal pad placed behind the metatarsal heads and a toe crest placed under the toes will also relieve pressure and reduce soreness (Fig. 8).

A stress fracture through the neck of a metatarsal may also produce forefoot pain. During walking, forces are generated through the first ray, while during running, forces are transferred primarily through the second ray. A new runner, whose second metatarsal is remodeling, is therefore particularly liable to a stress fracture. In more experienced runners, the second metatarsal may be as broad and strong as a normal first ray. Consequently, fractures in experienced runners typically will occur laterally in the thinner third and fourth metatarsals.

Sometimes a metatarsal stress fracture is not seen on initial x-ray films but shows up as a cloud of callus two weeks later. At times, a bone scan may be needed to show the stress reaction. In most metatarsal stress fractures, even in the earliest stage of forefoot swelling and pain, a careful look (a magnifying glass helps) at the x-ray film will reveal a little crack in the cortex. A cast is usually unnecessary. Most people with metatarsal stress fractures can walk wearing a forefoot strapping, soft orthotics or relief pads.

Sesamoids under the first metatarsal head in the tendon of the flexor hallucis brevis sometimes become injured, especially in runners who over-pronate. The tibial sesamoid is usually the sore one because of the shearing forces on it. Orthotics will reduce the shearing. A felt pad may be placed close behind the sesamoids. Forefoot padding also helps. In chronic cases, a rocker sole can be inserted into the midsole of running and walking shoes.

Great toe problems may also interfere with a runner's training. Hallux limitus refers to decreased motion at the metatarsal-phalangeal (MP) joint; hallux rigidus is a rigid MP joint; and hallux valgus is a bunion deformity. A rocker sole helps in cases of hallux limitus and hallux rigidus. If there is a bone spur dorsally on the metatarsal head and a



Fig. 8. Toe crest (top) and metatarsal pad reduce pressure on metatarsal heads.

spur projecting dorsally from the base of the proximal phalanx, pain may be relieved and significant motion gained by removing the spurs. Orthotics will slow down progression of the hallux valgus deformity and allow a better running gait. A pad shields the bunion, and a "toe straightener," placed between the great toe and the second toe, keeps the toes from rubbing together. An operation to remove the bump and straighten the big toe may be indicated, especially in a younger person, who may thus avoid developing arthritis.

Other painful problems of the feet can be easily cured. Painful corns over the proximal interphalangeal joint (PIP) joint are relieved by placing a toe shield next to the joint, tenting the toe box over the corn. Clawed toes and hammer toes are helped by wearing a toe crest but an arthroplasty of the PIP joint or a diaphysectomy of the proximal phalanx gives permanent relief. Ingrown toenails often require special scissors to remove a portion of the nail. Painful subungual bleeding is countered with a toecap or sticky felt padding to remove pressure on the nail. A soft corn between the toes can be

relieved with a "toe comb," a foam pad that separates the toes.

Unless a runner steps in a pothole, twists to avoid a car or runs on an old injury, running injuries are not haphazard. They follow predictable patterns based upon biomechanical variations. In some cases an uncorrected abnormality in stride or bone structure can produce stresses in several areas of the body at once. In other cases, injuries develop sequentially. By correcting the biomechanical variations, not only can the current injuries be cured, but later ones can be prevented.

## II. Evaluation

NOT all people who run are "runners." A tennis player, in the course of three sets lasting 30 games, may run and walk seven miles. Soccer players may run and walk about the same distance in a match. Nonetheless, running is the only sport in which you run continuously for periods varying from 20 minutes to over an hour.

Runners may be categorized as joggers, sports runners, long-distance runners and marathoners. Joggers run up to 20 miles a week, sports runners 20-40 miles, long distance runners 60-80 miles, and marathoners 80-100 miles or more.

Runners are further classified by their age and sex: old, young or "prime aged," male or female. Each group has special problems. Older runners must compensate for wear and tear on their bodies. Young runners risk injury when they do speed work during growth spurts or if they run more than 70 miles a week. The so-called "prime aged" runner is in the biological prime of life but sometimes trains too hard, too fast and too often; these errors in judgment lead to injury. Women runners are subject to a characteristic set of injuries for biological and social reasons. They are often "loose jointed" and have a high body-weight-to-bone ratio and are many times new to running. Therefore they may suffer from strains and sprains, stress fractures and the consequences of poor running form.

The runner's stride consists of four phases: float, heel strike, pronation and pushoff. It is the float phase which differentiates running from walking. In walking, one foot is always in contact with the ground; running is a series of leaps. Runners jump from one foot to the other. Each runner has a characteristic manner of landing. Forty percent of runners land on the outside of their heels while

another 40% land on the full foot, dropping back onto the inside of their heels. The remaining 20% land on the balls of their feet, their heels never touching the ground. The next stage in the stride is pronation, the process by which the foot absorbs shock by flattening at the subtalar joint below the ankle. The foot unlocks to absorb shock and then locks to become a rigid lever for pushoffs. As the runner's foot pronates, the tibia and knee rotate inward. This winding and unwinding action is rapid, placing extreme torque at the knee. Excessive pronation often produces knee injury. The final stage of the stride is pushoff, which is done through the second toe.

The continuous, fluid motions of the legs produce 47 identifiable stresses with each step. Consequently the cause of a runner's complaint may be distant from the site of the pain.

The evaluation of a running injury consists of such standard procedures as history and physical examination, including x-ray films as needed, as well as a dynamic evaluation of the runner's stride and form if possible, and an analysis of wear patterns on walking and running shoes. Accordingly, all of our runners are told to come to the examination prepared to run. We also ask them to bring all of the shoes that they wear during an ordinary week, including their everyday walking shoes, training shoes (especially old ones), racing flats and shoes with cleats or other grip aids.

### History

The runner can provide his history. A questionnaire will prompt him. The physician needs to know 1) the length of time the runner has been running, weekly mileage, and the races run in the last three months (with dates and mileage); 2) any surgery on the back or legs and any previous injuries; 3) date of onset of the current problem, what happened and what hurts, and what he or she thinks may be wrong. The runner's own diagnosis may not be correct, but by asking for it you may gain important clues about the cause of the injury.

### Physical Examination

The physician begins by noting the runner's general alignment. If the right shoulder drops, the runner is probably a "right hander." The right hander's left leg and foot will usually be longer than the right leg and foot, and the right foot will over-pronate. The longer leg may suffer lateral problems at the hip and knee, while the shorter leg may develop medial knee pain, posteromedial shin splints and other pronation problems.

Next the physician checks for knocked knees or bowed legs, flat or high arches, bunions, and the relative lengths of the toes. In most people, the great toe is the longest. This is called an "Egyptian" foot, because the Egyptians carved their statues this way. In the "Greek" foot, the second toe extends past the first one. This type of foot often over-pronates. Corns (calluses over the joints), ingrowing toenails, and "marathon toes" (subungual bleeding) should also be looked for.

The runner is asked to bend over so that the physician can note how close to the floor he or she can reach with the knees straight and also check for scoliosis. The experienced examiner can confirm impressions of leg-length difference by feeling the top of the pelvis (Fig. 9).

In the second stage of the examination the runner's feet are the focus, with the runner kneeling on the examining table facing away from the physician. If a knee hurts too much to kneel on, the runner may lie prone on the table, but the feet are well relaxed and easiest to examine when the runner is in the kneeling position. The physician first checks the Achilles tendon and the area behind the heels and determines the range of motion of the subtalar joint. Then the soles of the feet are palpated (Fig. 10). Finally, the feet are examined for calluses. Pinch calluses on the great toe and alongside the first metatarsal are normal in active people. Calluses under the second metatarsal heads, however, are found in runners with pes planus and overly flexible feet. High-arched runners develop calluses under the first and fifth metatarsal heads. Prominent calluses may act as stones in the shoe and create injury; these are trimmed. Sometimes a callus is invaded by a wart virus, identifiable by little pepper spots (capillaries) which are seen when trimming them. In preparation for the dynamic evaluation, a straight line is marked down the back of the Achilles tendon to the base of the heel.

The runner is asked to lie face up, and hip rotation is checked. Decreased internal rotation of the hip may be an early sign of osteoarthritis. With the opposite leg bent, the runner's leg is raised to check for hamstring flexibility. The runner should be able to point the leg at the ceiling. Then, with the legs out straight on the table and relaxed, the physician looks for fluid in the knee, checks leg length again, this time by comparing the level of the malleoli, and feels for distal pulses.

In the final stage of the physical examination, the runner sits on the edge of the table with knees dangling off the side so that the physician can note general stability and knee mobility and palpate



Fig. 9. Leg length difference can be felt at top of pelvis.

Fig. 10. With runner kneeling, examiner palpates feet.



over troubled areas, such as the iliotibial band and the anteromedial part of the knee. Then the legs are palpated over the pes anserinus and the posteromedial part of the leg and anterolaterally for shin splints. Ankle swelling is looked for and then, with the knee both extended and flexed, ankle flexibility is checked.

Sometimes x-ray films are needed to supplement the physical examination. "Action" x-rays are best because they are taken with the runner standing or in a position of activity (Fig. 11). X-ray films of the spine, pelvis, knee and feet are always made with the runner standing. Oblique views can locate stress fractures, sunrise views of the kneecap check on patellar tracking, and AP views of the feet in the shoes are useful when it is suspected that grip aids on the soles of the shoes are causing trouble (Fig. 12). "Skin pin" views, x-ray films taken with either a paperclip or a pin placed on the skin over the painful area, provide additional information.

### The Running Shoes

Shoes reveal how a runner runs (Fig. 13). If the lateral side of the heel is worn, the runner either strikes the heel while running or does a lot of walking in running shoes. If the medial side of the heel is worn, the runner is a full-foot striker who drops back onto the heel. Once the outsole rubber has been worn through into the softer midsole, the shoes are no longer acceptable. Many runners level out the worn outsoles of their shoes with a sticky material. However, the material usually becomes so hard after it sets up that it is harmful. Furthermore, repair of the outer sole does nothing to rejuvenate the midsole, which is the source of most of the cushioning.

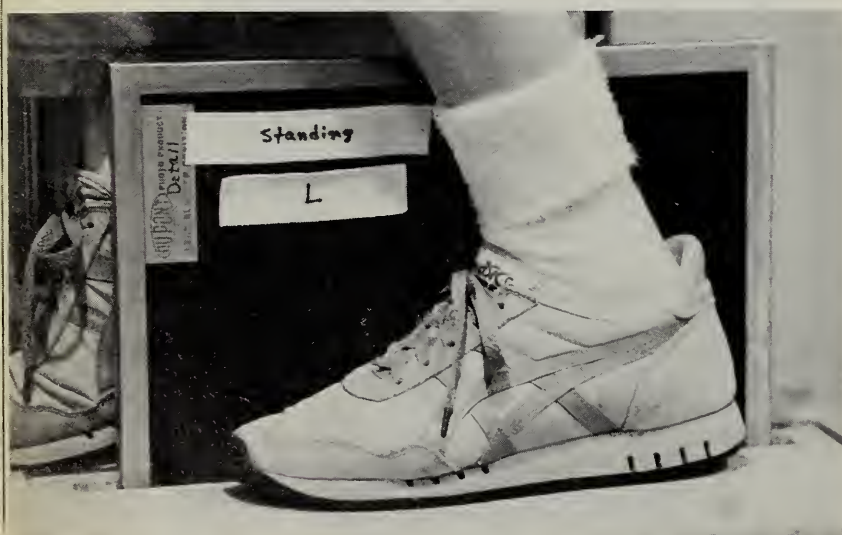


Fig. 11. For "action" x-ray, runner's foot, with or without shoe, assumes position that hurts.

### Dynamic Evaluation

A treadmill video evaluation is extremely useful because it enables the examiner to build on the conclusions drawn from the static examination and provides valuable information about the dynamics of the patient's running (Fig. 14). It can only be performed, however, if the runner's pain is negligible enough that he is able to run. Running on a treadmill, however, is slightly different from running on an ordinary surface. Most runners are unfamiliar with treadmills and may adopt a cautious gait. They tend to adopt a shorter stride and run more on the front of their feet than they might normally. First, the runner is asked to walk with running shoes on to get used to the treadmill. Then the speed is increased to 5 mph and the video camera is positioned low and behind the runner, focusing on the feet. This gives a "caterpillar's view." The examiner looks to see if the runner over-pronates and toes out or lacks pronation and toes in and notes whether the foam midsole of the shoe is collapsing and whether the counter of the shoe deforms as the runner strides.

Next, the runner takes the shoes off and runs barefooted. Using the black line as a guide, the barefooted running is compared with the running in shoes. Sometimes the shoes are the cause of the problem. For instance, a runner's stride can be thrown off if the midsole of his shoe collapses during running. A soft orthotic, a heel lift or a heel wedge may be inserted into the shoes during treadmill running to determine whether they help.

### Case Report

Consider a female runner who has developed retropatellar or peripatellar knee pain after increas-



Fig. 12. Cleat (upper arrow) may be pressing on sesamoid bone (lower arrow).

ing her mileage. On examination, she is a right-hander with right shoulder droop. She has bowed legs, pes planus and Greek toes. These conditions indicate a hypermobile foot. Her left leg is from 1/4-1/2 inch longer than her right one. A 1/4-inch difference is perfectly normal, but even this mild difference can contribute to running injuries. A person whose left leg is longer than the right is like one who is always walking and running down the left side of a crowned road. The knee is tender when the kneecap is pressed and tender anteromedially and over the patellar tendon. The callus under the second metatarsal head is more prominent on the right foot.

The treadmill examination reveals that the right foot over-pronates and is turned out. X-ray films of the knee show a normal AP and sunrise view, but on the lateral view there is sclerosis in the middle of the kneecap just beneath the articular surface. A check of her running shoes reveals that the heels have worn on the lateral sides and the shoe counters have collapsed medially. It is also discovered that she wears very flexible walking shoes or sneakers.

This runner shows a typical combination of signs and symptoms caused by excessive pronation. As the foot collapses, the knee turns in and flexes. When the foot straightens, the knee turns out and extends. All this activity within a millisecond overloads the knee. Repeated a thousand times a mile, this stress causes pain from patellar shear and synovial pinching.

To help this runner understand her problem I showed the runner the treadmill video, pointing out the over-pronation on the right and describing how over-pronation causes a sideways slide of the patella and peripatellar pain. I made a "home-



Fig. 14. Treadmill video provides dynamic assessment of runner's gait.

cooked" pair of Aliplast-XPE™/Aliplast-10™ (AliMed) orthotics for immediate wear and fitted her with an infrapatellar strap to be worn while walking and running but not while sitting. A runner subconsciously favors the injured side and loses strength fast, so hip and knee Tubics were demonstrated.

Arch-raising exercises to strengthen the intrinsic muscles of the feet were also demonstrated. A daily home treatment program that includes moist heat, massage and icing were recommended, and it was suggested that the runner take two buffered aspirin four times a day, especially before extended walks. I rarely use nonsteroidal antiinflammatory medicines or butazolidine because I have seen so many runners become ill after taking them. The importance of wearing firmer street shoes with good counters was also stressed.

### III. Treatment

THE inevitable question the injured runner asks is, "When can I start running again?" The examination of the runner may have been complete, the diagnosis accurate and the educational efforts excellent, but what the runner is really interested in is treatment and rehabilitation so that he or she can get back to running.

Most of the treatment and rehabilitation methods



Fig. 13. Toe wear shows pattern of a "supinator," i.e., runner who toes off too far laterally.

that can be prescribed are simple biomechanical ones, such as a different pair of shoes, or inserts or orthotic devices, or occasionally, injections or surgery. But successful recovery depends on the runner's own efforts as well. By performing a home treatment program, training in water, and then following a step-by-step, return-to-running program, the runner can be healthy and running without pain in a matter of months. The biggest problem is getting the runner to see the injury in the proper perspective.

Most runners think of running in terms of weekly and even daily mileage. They're often horrified when they have to give up a few days of running, and they're bound to balk when faced by the prospect of being out for weeks and even months. If this commitment to running can be channeled into a commitment to a rehabilitation program, the chances of a satisfactory recovery are raised significantly.

### Home Treatment Program

The home treatment program consists of moist heat, self-massage, exercises and ice. Moist heat is more effective than dry heat. A moist heating pad contains a sponge that the runner dips in water and places in a pouch on the pad, or the runner can immerse the injured limb in a tub of warm water, or in the case of a hip or pelvic injury, sit in a bathtub or Jacuzzi®. After 20 minutes of moist heat, the runner should massage the injured area. I recommend baby oil or lanolin cream. One runner I know uses tanning oil. The key is to use a lubricant that doesn't rub in easily and lose the ability to be a friction fighter. The oil should be placed on the skin and rubbed in with a circular motion. If a muscle is injured, it can be gently kneaded. The runner should continue the massage for about seven minutes. Both moist heat and massage bring in fresh blood containing oxygen and nutrients and carry away waste products. Nerve conduction speed increases, and the tissue becomes more supple and thus ready for activity. The idea is to literally warm up the injured area.

After massage, the runner can do therapeutic exercises to strengthen the area. If the prescribed exercises cause pain, the runner should reduce the intensity of the exercise or do fewer repetitions. After the exercises, the runner should apply cold to the injured area by using either an ice cup, an ice bag or ice cubes. To make an ice cup, the runner places a paper cup filled with water in the freezer. After the water has frozen, the paper is peeled down from the cup's open end to expose some

of the ice, the bottom of the cup grasped, and the injured area massaged. Ice bags can be used in conjunction with a wet turkish towel. The runner soaks the middle of the towel with cold water, places the wet part of the towel over the injured area and fills a plastic bag with ice chips, then rests the ice bag over the moistened area of the towel and folds the rest of the towel over the bag for insulation. Another variation is to put an elastic wrap in a plastic bag that has water and rubbing alcohol in it. Then I refrigerate the bag, remove the cold wrap and wind it around the injured part. An ice bag over the wrap provides additional cooling. My favorite icing method, however, is ice cube massage because it is so simple. Hold an ice cube with a washcloth to protect the fingers and pass the exposed face of the ice cube gently over the injured part. The ice usually melts in about four minutes but can be repeated. Icing techniques prevent swelling, the greatest enemy of healing.

### Running Shoes

When improper shoes are the cause of a runner's problem, they are more often the everyday walking shoes. Most persons take an average of 8,000 steps a day and put literally millions of pounds on each foot.

Everyday walking shoes vary, from very flexible ones with crepe soles to stiff loafers with hard soles and low heels. Very flexible shoes are harmful



Fig. 15. Cast cutter easily slices midsole of running shoe.

because the shoes allow too much motion. Flexible shoes usually do not provide enough shock absorption and lack arch support. Fashionable women's shoes are worst of all. These narrow shoes with tight toe boxes have either too high or too low a heel and usually lack support and shock absorption. I recommend that men obtain Rocksport™ shoes, which have leather uppers and Vibram® soles. I advise women runners with problems related to footwear to wear running shoes to work if possible.

Today's running shoes are generally well designed and are often constructed to meet specific kinds of running problems. The newer running shoes have higher heels, good rearfoot control with medially-extended counters and cradles or stabilizing plates or bars. The uppers are generally leather and nylon, providing good support while "breathing." Runners with flexible feet require a straight-lasting, boarded shoe, while runners with rigid feet should wear a curve-lasting, moccasin-type shoe.

### Shoe Modifications

Sometimes shoes need to be modified. The modifications can be to the inside or to the outside of the shoe. Heel lifts, wedges, arch pads, metatarsal pads and all kinds of relief pads can be made by adding felt with a sticky backing under the shock-absorbent permafoam insole. Felt pads may also be glued to the inside of the shoe counter to relieve heel rubbing, to snug up the heel, or to relieve pressure from the shoe on the top of the foot. Lifts and wedges for outside the shoe can be made from materials such as Nickelplast™, Aliplast-XPE™, and rubber. They are attached with glue. The midsole of a running shoe may be cut easily with a cast cutter, and heel lifts, wedges and rocker soles inserted (Fig. 15).

The capacity of a running shoe to absorb shock diminishes appreciably after about 500 miles. A runner can determine when to change to new shoes by buying a replacement pair at 300 miles and wearing the new pair during a short training run every two weeks until it is determined that the old shoes have broken down and a switch is advisable.

### Orthotics

Some day every good shoe will contain an insole that positions the foot in a neutral position, the position in which tendons function optimally and the foot functions best, but to date orthotics are needed to achieve this goal. Commercial, off-the-shelf orthotics do not work well because they are made for everyone but fit no one. Of the techniques for making orthotics, the simplest is to glue sticky



Fig. 16A. Runner's feet held in neutral position for casting.



Fig. 16B. Cast (left) is filled with plaster to produce a "positive," to which leather/cork-latex mixture is applied (middle) for finished orthotic (right).

felt under the already existing foam insert of a running shoe. Lightweight orthotics are made by covering Plastazote-2™ with Aliplast-10™. The pieces are heated, molded to the foot in the neutral position, and inserted in the shoe. Excellent orthotics can also be shaped from Aliplast-XPE™ blanks. The synthetic blanks are heated and placed under the foot, which is protected by a layer of stockinette. The foot is held in the neutral position while the blank molds to the foot. A lift or wedge may then be glued under the blank, and the blank covered with a soft layer of foam. Perhaps the most durable orthotic is made of cork and latex. I have had thousands of cork-latex orthotics made after casting feet in the neutral position, and most runners have been highly satisfied with them (Figs. 16A

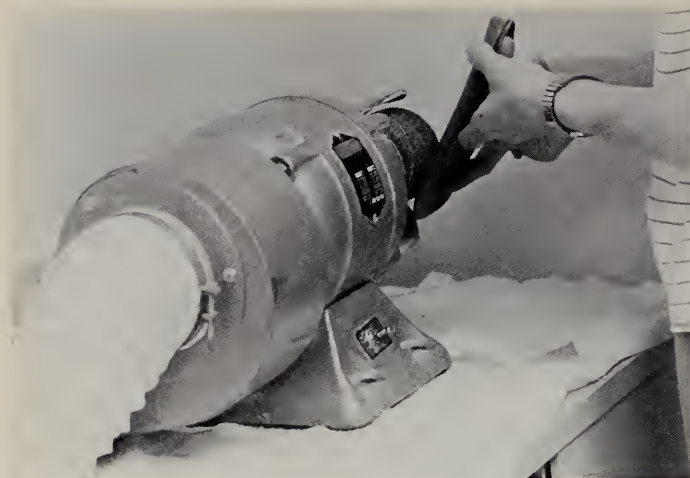


Fig. 17. Vacuum grinder for modifying orthotics.

and 16B). A vacuum grinder is invaluable for making minor modifications of orthotics (Fig. 17).

Some orthotics, such as the frequently prescribed plastic orthotics, which sometimes cost more than \$200, block the normal action of the foot. They may alleviate a runner's current problem such as knee pain, but because they often provide too much control, they may lead to more serious troubles, such as Achilles tendon or metatarsal head injury.

The type of orthotic prescribed depends on the flexibility of the runner's foot. A very flexible foot requires a more rigid orthotic. Lifts or wedges are added to these orthotics medially. A rigid foot requires a flexible orthotic, posted laterally. Interestingly, both the flexible and the rigid foot usually benefit from a heel lift. The flexible foot benefits because the lift reduces pronation, while the rigid foot benefits because the lift evens out the rearfoot-to-forefoot level. The normal foot should be left alone.

## Deep Water Running

A program of water exercise, called Poolex®, has been developed by the author for runners suffering from back strain, pelvic stress fracture, hamstring pull, knee sprain, pain behind the knee cap, bad shin splints, plantar fasciitis, or any other problem that interferes with running. The exercises also allow runners to train when recovering from an operation.

Poolex is based on the principles of isokinetic exercise, in which resistance is always commensurate with exertion. The harder the runner pushes against the water, the more water resistance is encountered; if the pushing lets up, the water resistance decreases. The water also resists chest expansion, thus building breathing

## Injections

In some instances, despite home treatment, orthotics and shoe modifications, pain persists. A local steroid injection may help some of these running injuries, which include abductor strain, greater trochanteric bursitis and iliotibial band strain. I prep the troublesome area with Betadine®, find the sore spot, spray on ethyl chloride, then inject a mixture containing 8 ccs of Marcaine® hydrochloride, 1 cc of Xylocaine® and 1 cc of Celestone® phosphate (a combination of short-acting and long-acting hydrocortisone) with a 21-gauge needle, making sure that the plunger meets no resistance so that the solution bathes the injured area. Relief occurring in about five minutes indicates that the injection will probably work.

Some precautions are necessary when giving injections to athletes. If resistance is met while pressing the plunger, move the needle slightly so that the contents flow easily. The mixture must not be injected into the skin because such an injection may cause skin atrophy and the loss of pigment. Steroids must not be injected around the quadriceps, patellar, or Achilles tendons because ruptures of these powerful tendons are known to occur sometimes after these injections. The steroids may alleviate the soreness to such a degree that the runner may run or jump on the leg, damaging the inflamed or degenerated tissues.

## Pool Exercises

The injured runner needs to stay fit while the injury heals. Swimming is one way to stay in shape, but because it is 95% arm work, it is not particularly useful for runners. The runner can try riding a

capacity. There are therapeutic benefits as well. While the runner exercises, the pressure of the water acts like a big support stocking. In addition to providing resistance, the constant flow of water provides a massage.

The "victory effect" is perhaps the most important result of Poolex. Rehabilitation seems to be accelerated if the runner can maintain an exercise program without interruption. Perhaps the body interprets the ability to continue to train without discomfort as a sign that the injury has healed, a response that may in itself speed healing. Such a mechanism, though not yet well defined, may account for the fast recovery from injury regularly seen after simple Poolex.

bicycle to maintain endurance, but cycling uphill or against resistance risks the possibility of overstressing already injured legs. Circuit training with weights may keep the runner fit, but most of these exercises work the arms. The problem with all these alternatives is that by the time running can be resumed, the legs will be out of shape, and running on poorly conditioned legs invites further injury. Poolex® is an answer to this problem (see box).

Before exercising in our pool, the injured runner sits in a 99 degree whirlpool to warm up. The water temperature in the whirlpool simulates blood flow, decreases tissue viscosity and increases nerve conduction speed but is not so warm that it saps strength. The exercise pool water is kept at 83½°. This temperature is comfortable for workouts. A whirlpool warmup and a warm pool are not absolutely necessary; in fact, effective Poolex may be done in any pool. In a whirlpool bath or shallow pool, the runner can rest on his or her back or hang on to the side and move the legs in a bicycling motion. These exercises are satisfactory, but deep-water running provides a harder and more interesting workout.

For deep-water running, the runner dons a water skiing belt, rescue tube or canoeing vest, and "runs" in a diving well or in the deep end of a pool without touching the bottom (Fig. 18). The exerciser tries to stay erect while running, bringing one knee up towards the chest while thrusting the other leg straight down, and either running in place or moving around. The action is more like bicycling than running. The advantage of the ski belt and the other flotation aids is that they enable the runner to maintain form without having to concentrate on keeping his or her head above water. Without a ski belt, Poolex is very much like running across a plowed field.

Poolex offers the runner a variety of training routines. The runner can do endurance work or intervals. Poolex intervals are just like dry-land intervals; the runner alternates all-out runs at top speed for 60-70 seconds, as if he were doing quarter-miles on the track, with easy runs of 60-70 seconds. A standard day consists of ten repeats, but any number of repetitions or any combination of hard and easy work are possible. The purpose is to continue the runner's development and maintain the psychological commitment to training. The deep-water program may be done every day or it can be alternated with an upper-body conditioning program such as Tubics (Fig. 19).

In addition to deep-water running, the runner may do deep-water hops and scissors and shallow-



**Fig. 18.** Wearing ski belt, patient "runs" against current created by a jet.

water Poolex. To do hops, the runner should don a flotation vest and stay vertical in the water. The heels are brought up to the buttocks and then both knees are straightened simultaneously. For scissors, the legs are moved forward and back in a scissoring motion with the knees straight. The water will exert a substantial resistance and give the legs, especially the quadriceps, a hard workout. In shallow-water Poolex, the runner may walk and run in varying depths of water, starting at armpit depth, where body weight is only about one-tenth of normal weight, and advancing to chest-deep and then to waist-deep water as the injury clears up.

To increase the intensity of a runner's workout, deep-water Tubic running may be in order. The runner buys two used 27 X 1 1/4-inch bicycle inner tubes, cuts out the valves, washes and dries them, joins the two tubes with a square knot, attaches one end of the tubes to a railing or ladder in the diving



**Fig. 19.** Lightweight bicycle inner tube offers resistance to this runner's arm swing.

well, and ties the other end to the ski belt. Thus tethered, the runner can sprint away for the hard part of the workout, letting the tube draw him/her back as the exercise slacks off. One tube will do, but two tubes give more range.

The runner should use Poolex with care. Although these exercises only rarely produce soreness, the runner may notice some stiffness in the thighs because the knees are raised so high. If pain is experienced during the pool work, the runner should consult a physician.

By devoting approximately one-third of training mileage to Poolex, the quality of all the runner's training can improve. Most runners say that pool workouts are more strenuous than dry-land training.

### **Return to Running**

I advise our runners to follow a return-to-running program designed by Dr. David M. Brody, a running injury specialist in Norwalk, Connecticut, who is medical director of the Marine Corps Marathon in Washington DC. Before returning to running, the

runner must be totally free from discomfort during normal activities, and the injury must no longer be tender. I ask the runner to rate any pain during normal activities on a scale of 0-10. Zero is normal, 10 is severe pain. Only when the runner can honestly rate any pain as 0 may dry-land training be resumed.

A runner who normally trains up to 20 miles a week begins with a walk-jog every other day, jogging four minutes and walking one minute and repeating the process. Five minutes are added to each session until pre-injury mileage is regained. A runner who has trained 20-40 miles a week should begin with a mile every other day, gradually return to his pre-injury daily mileage, then add days until the average weekly mileage is regained. A runner who is used to doing 40-70 miles a week may start with two miles a day every other day, taking 4-6 weeks to reach pre-injury mileage. If symptoms recur, the runner should cut back to the previous week's mileage or cut back on running by 20%. Should the symptoms continue, the runner should stop running and consult a physician for reevaluation.

A runner who is returning to the roads should follow a home treatment program before and after the daily run and also in the evening. Before a run, the runner should apply a moist heating pad to the injured part for five minutes, stretch for 3-5 minutes, then go for the prescribed run. After the run, ice should be applied to the injured limb for ten minutes. At night moist heat should be applied for 15-20 minutes, the injured part coated with baby oil and massaged deeply with the fingertips. Then any prescribed stretching and strengthening exercises can be done, finishing with an icing.

Most of the injured runners the physician sees are not the competitive ones, but part of a grass roots health movement, people running for 20 minutes or so three times a week for their health. By running, these people stay fit, control weight, lower stress, raise energy and look better. Running prevents other health care problems. By helping an injured runner the physician not only can cure a musculoskeletal problem but helps a person maintain a lifelong commitment to good health. Even Thomas Jefferson, who placed a high premium on intellectual curiosity, felt that "Exercise and recreation are as necessary as reading."

The Aliplast, Nickelplast and Plastazote foam products and the vacuum grinder used by the author in making and modifying orthotics are distributed by AliMed.

# ABSTRACTS

*These abstracts derive from the annual meeting of the Virginia Society of Otolaryngology/Head and Neck Surgery on April 25-28 in Irvington. Dr. John Cole, Jr., was program chairman.*

**Pulsatile Tinnitus of Venous Origin.** Paul R. Lambert, MD, and Allen C. Roth, PhD, *Charlottesville*.

Tinnitus is a common symptom, particularly in patients with otologic disorders. Usually it is associated with sensory or neural injury within the auditory system and cannot be heard by examiners. A subgroup of patients, however, describe a pulsatile sound which may be audible to others. These patients frequently have a definable lesion which requires or can be alleviated by surgery. Etiologies include glomus tumors, vascular abnormalities, palatal myoclonus and other muscular disorders, and increased cardiac output.

A frequent and often overlooked cause for pulsatile tinnitus is a venous hum from the sigmoid sinus and internal jugular vein (IJV) complex. This condition is suspected when maneuvers to decrease blood flow in the IJV, i.e., Valsalva maneuver, light cervical compression, alleviate the tinnitus.

We have studied several patients with venous hum tinnitus using computerized ultrasonography and Doppler flow measurements. This data showed a high probability of turbulent flow within the sigmoid sinus on the symptomatic side in each patient. Anatomically, there is a large change in vessel diameter and configuration as the sigmoid enters the jugular bulb, and it is hypothesized that turbulence occurs there. In other patients, definite structural abnormalities such as a diverticulum of the jugular bulb have been seen angiographically, and probably account for the turbulent flow.

Our experience with surgery for these patients is presented. Many cases can be successfully treated by IJV ligation; occasionally, extraluminal obliteration of the sigmoid sinus is necessary.

**Rapid Maxillary Expansion as an Adjunctive Technique for Improving Nasal Blockade.** George M. Meredith, MD, *Norfolk*.

Often we are confronted with patients in the 6-12 year age group who have advanced nasal blockade. These patients classically mouth-breathe and snore. They may have periods of sleep apnea. Dentofacial development can be significantly retarded.

Rapid expansion of the maxillary dental arch from age 4-17 can produce dramatic improvement in a child with constricted maxillary arch or tight intranasal distance. Rapid maxillary expansion can be accomplished in about four weeks. A retainer is used for six months or so postexpansion. The central incisors initially split one from the other and then migrate back to the midline over the course of several months.

**Total Glossectomy.** Esrafil Abedi, MD, Aristides Sismanis, MD, and Glen W. Knox, MD, *Richmond*.

It has been advocated that extensive tumors of the tongue and floor of the mouth can be treated by total glossectomy with preservation of the larynx by suturing the tip of the epiglottis to the pharyngeal wall. Four patients at the Medical College of Virginia have been treated with such a technique. All four patients developed severe persistent aspiration pneumonia, and speech was not understandable 3-6 months postoperatively. Subsequent total laryngectomies were required to resolve the complications. It is our opinion that preservation of the larynx in face of total glossectomy should be practiced with caution and that total laryngectomy may well be preferable.

**Juvenile Nasopharyngeal Angiofibroma: Comparison of Treatments.** Charles M. Johnson, III, MD, and Robert W. Cantrell, MD, *Charlottesville*.

Juvenile nasopharyngeal angiofibroma is a comparatively rare benign tumor, having a preponderance in adolescent males. Therapy is directed to surgical removal if possible; however, large amounts of blood loss have occurred. Estrogen therapy followed by surgical removal has been advocated to lessen operative blood loss. More recently, tumor embolization by arteriography followed by surgery has been recommended as a better technique of reducing such loss.

We compared one group of patients who received embolization prior to surgery to another who received estrogen therapy prior to surgery. The two groups were evaluated for blood loss during surgery

and for perioperative morbidity. Our results indicate no significant differences. We suggest that estrogen treatment followed by resection for juvenile nasopharyngeal angiofibroma is an acceptable and, in some cases, preferred alternative to embolization.

**Palatopharyngoplasty for Obstructive Sleep Apnea.** David Rosmarin, MD, and Donald E. Sly, MD, *Norfolk*.

Palatopharyngoplasty (PPP) is performed both for obstructive sleep apnea and the more common cause of "simple snoring" with its social effects. Preliminary findings in one of the largest series show PPP to be nearly entirely effective for snoring, and only half so for obstructive sleep apnea. This paper will present recommendations for patients with sleep apnea and snoring and will outline the initial results of workups and treatment at Eastern Virginia Medical School.

**Bilateral Facial Nerve Paralysis.** Randall E. Dalton, MD, Aristides Sismanis, MD, and Esrafil Abedi, MD, *Richmond*.

In the past two years we have had the opportunity to evaluate and treat two patients with spontaneous bilateral facial paralysis, which is found infrequently compared to the more common unilateral facial paralysis. Bilateral idiopathic facial palsy has been noted to occur in 1.5%-2% of all Bell's palsy patients. Central neurological etiologies should be ruled out in these patients.

**Anterior Choanal Atresia.** Esrafil Abedi, MD, Aristides Sismanis, MD, and Anthony Jackson, JD, *Richmond*.

Choanal atresia is a rare congenital anomaly consisting of the obliteration or stenosis of the nasal apertures and occurs more often unilaterally than bilaterally. We present a rare case of anterior choanal atresia in a 41-year-old black male who presented at the Medical College of Virginia Hospital complaining of nasal obstruction since birth. On physical examination, the patient was found to have bilateral membranous atresia in the nasal vestibule region. The patient was treated surgically through an intranasal approach and has experienced good results with both nasal cavities to date.

**Dynamic Compression Plating.** Paul A. Levine, MD, *Charlottesville*.

In 1981, I published the first small series of successful treatment of fractures of the edentulous mandible in the United States, and since that time,

both my experience and the experience of others has been universally satisfactory, employing this technique for fixation and reduction of fractures without intermaxillary fixation. This presentation will present my up-to-date experience, indications and contraindications for utilization of this technique, and helpful hints to avoid surgical pitfalls.

**Paranasal Sinus Disease and Cystic Fibrosis.** Richard M. Galitz, MD, Albert L. Roper, II, MD, and Cyrus S. Amiri, MD, *Norfolk*.

Cystic fibrosis is a systemic disease that often presents first to the otolaryngologist with problems relating to the nose and paranasal sinuses. Diagnosis must be undertaken in conjunction with the pediatrician, allergist and radiologist. Long-term management of paranasal sinus disease in the systemically ill child will be discussed.

**Dural Homograft in Tympanoplasty.** John Cole, Jr., MD, *Roanoke*.

A brief discussion is presented of the requirements for tympanic membrane function with the characteristics that would be considered necessary for the ideal material for replacement of the tympanic membrane and/or general cavitory reconstruction in the ear is presented. The preparation and obtaining of the dural homograft is discussed followed by a compilation of the author's experience using this material in 160 cases.

**Tympanostomy Tubes, Review.** Walter W. Schroeder, MD, and Robert T. Jackson, MD, *Norfolk*.

Since their formal introduction in 1954, tympanostomy tubes have gained wide acceptance. There are numerous varieties of tubes available for use today, and modifications are continually being introduced. Indications, treatments, and complications with several of the more popular tympanostomy tubes currently in use in a private practice setting were examined. The results of this review are reported.

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*The following abstracts were awarded prizes in the student research presentations that were part of Kinloch Nelson Student Honors Day at the Medical College of Virginia on May 9, 1985.*

**Computer Modeling of Insulin Binding Kinetics.** Timothy J. Martin (M-86).

The objective of our research was to model various mechanisms of insulin to its receptor using

SPICE, an electrical circuit simulation program with remarkable application to biological systems, and to test these models to see if they can account for the experimental observations found in the literature. Laboratory studies of insulin binding using rat adipocytes reveal several features which are not consistent with a simple mass-action binding mechanism (i.e.,  $H+R \rightleftharpoons HR$ ). These features include nonlinear Scatchard plots, multiexponential dissociation kinetics, accelerated dissociation of labeled bound insulin in the presence of unlabeled insulin in solution, dissociation rates inversely related to association times, as well as other complex features. The reproducibility of these characteristics by computer simulation was examined by subjecting six models (offered as possible mechanisms in the experimental literature) to the corresponding experimental conditions. Model parameters were chosen to produce a system with an appropriate association  $K_D$  and dissociation half-life. In testing the various models, the simulations were able not only to rule out all but one model, that of a two-step intramembrane receptor, but were also able to provide insight into those features critical for model behavior.

**Vasopressin-Induced Inhibition of Ganglionic Transmission.** Larry N. Johnson (M-85).

Vasopressin is a peptide which is released from the neurohypophysis and which is known to have potent antidiuretic and vasoconstrictor effects. Recent evidence suggests that this peptide may influence the nervous system in a manner which alters the autonomic control of the heart and peripheral circulation. Previous studies from this laboratory have demonstrated that intravenous vasopressin inhibits renal (post-ganglionic) but not lumbar (pre-ganglionic) nerve traffic by a mechanism which appears independent of arterial baroreflexes. These findings may be explained by an effect of vasopressin on ganglionic transmission. If vasopressin alters ganglionic transmission, then one would predict that intravenous administration of this peptide would inhibit renal sympathetic nerve traffic in animals with spinal cord transected. Thus, experiments were done in six alpha chloralose anesthetized rabbits following spinal cord transection. Intravenous AVP (40mU) inhibited renal nerve activity by  $-43 \pm 5\%$ . This effect was abolished by a vasopressin antagonist ( $V_1$ ) which blocks the vasoconstrictor effects of AVP ( $d(CH_2)_5[Tyr(Me)_2]AVP$ ). Thus, intravenous vasopressin inhibits renal nerve traffic in rabbits with spinal cord transected or intact. These findings are consistent

with an influence of vasopressin on ganglionic transmission in renal sympathetic ganglia.

**Molecular Characterization of Plasmids Coding the Human Enteric Colonization Factor I of Enterotoxigenic *Escherichia coli*.** Thomas N. Swanson (M-85).

Enterotoxigenic strains of *Escherichia coli* are equipped with proteinacious fimbrial structures which mediate specific adherence to the mucosal surface of the intestinal tract of man and animals where they cause severe cholera-like diarrhea by the elaboration of enterotoxins. The presence of both toxin and adherence factors are required for virulence. Enterotoxigenic *E. coli* express one of two distinct colonization factors, designated CFA/I and CFA/II. The genetic determinants of these adhesins reside on bacterial plasmids, along with those for the associated enterotoxins.

Plasmids coding the CFA/I adhesin were isolated from clinical strains. The genetic determinant of CFA/I was identified by insertional inactivation using transposable genetic elements, and its location on the parent plasmid was mapped. The CFA/I determinant was found to exist as two independent operons as defined by complementation studies, separated by a large region of intervening DNA. Molecular cloning techniques were used to isolate each operon, and their behavior was studied separately and together in the *E. coli* minicell system. Genetic engineering techniques were employed to produce a hybrid recombinant molecule capable of mediating CFA/I expression.

A 26,000 dalton protein is produced by the operon designated c1 and represents the CFA/I fimbrial subunit protein. This polypeptide is produced as an immature precursor form in strains possessing only the c1 operon and was identified by immunoprecipitation with specific antiserum. The c1 determinant was found to reside on a 1.4 kilobase pair Hind III-Eco RI fragment of DNA from the parent plasmid. The expression of the CFA/I phenotype is controlled by a distinct operon called c2, which appears to encode functions that process, transport, assemble and anchor the CFA/I fimbriae in the cell envelope. Strains which contain both functional regions of the determinant produce the mature form of the CFA/I subunit protein.

A model for expression of the CFA/I adhesin was developed based on the information obtained in this study and on studies made of similar adhesin systems from enterotoxigenic strains which affect other mammalian species. The genetic organization of all these determinants bear similarities which may reflect their evolutionary history.



**All three** of Virginia's medical schools receive scholarship grants from The Medical Society of Virginia at commencement time each year. At the Medical College of Virginia, this year's recipients were announced during the Student Honors Day at which the abstracts on the previous pages were presented. Three of the recipients are shown above, listening to Dr. C. M. Kinloch Nelson, himself an MCV alumnus, who brought greetings and good wishes from The Medical Society of Virginia. From left: Dr. Nelson, Mark Johns (M-87), Mark Basham (M-86), and Joy Parks (M-87).

A few moments later, up the steps of the Egyptian Building came Dr. Kinloch Nelson, the former MCV dean for whom the college's Honors Day is named. Hailing his nephew with an avuncular quip, he broke up the photography session as shown at right.

*Photographs by Tim Wright*



# VIRGINIA MEDICAL

# EDITORIAL

## Plants as Poisons

A RECENTLY published summary of data collected from 16 large poison control centers in the United States gives the best sample to date of the types of poisoning being experienced by Americans.<sup>1</sup> The data for 251,000 poison calls were analyzed. Plants accounted for 8.9% of all calls. Of the 95 deaths reported, none was due to plant ingestion. More than 80% of the plant-related calls involved children under 6 years. For children under one year of age, the ingestion of plants is the commonest reason for a call to a poison center.

Poison centers categorize plants according to the toxic ingredient. One group includes non-toxic plants which have been found to be safe to ingest either through experimentation or, more commonly, extensive clinical experience. In the recent data, 28% of all plants ingested were in the non-toxic category.

The group second in frequency included plants which contain insoluble oxalates. These plants cause irritation to the mouth, pharynx and esophagus. The most commonly reported species are *Philodendron* and *Dieffenbachia*. The reports of one-quarter of these cases described minor symptoms, while 0.6% reported more serious problems. Plants causing gastrointestinal irritation and those causing dermatitis were next in frequency. While both cause disease, life-threatening problems would be rare. These four groups account for 76% of all calls regarding plants.

Plants, therefore, are a frequent cause of concern

but infrequently cause death or serious illness. Determining the toxic potential of plants is most difficult. Few physicians have the botanical skills, and books give limited coverage. Virginia's poison control centers have lists of the common non-toxic plants; they are available for the asking.

L. K. GARRETTSON, MD

Box 581, MCV Station  
Richmond VA 23298

1. Veltri JC, Litovitz TL: 1983 annual report of the American Association of poison control centers national data collection system. *Am J Emerg Med* 1984;2:420-443

### POISON CONTROL CENTERS

Central Virginia Poison Center, Box 522, MCV Station, Richmond VA 23298, hotline (804) 786-9123.

Blue Ridge Poison Center, Box 484, University of Virginia Medical Center, Charlottesville VA 22908, hotline (804) 924-5543; toll-free 1-800-446-9876.

National Capital Poison Center, Georgetown University Hospital, 3800 Reservoir Road, Washington DC 20007, hotline (202) 625-3333.

Tidewater Poison Center, DePaul Hospital, 150 Kingsley Lane, Norfolk VA 23505, hotline (804) 489-5288; toll-free 1-800-552-6337.

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# VIRGINIA MEDICAL OBITUARY

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## **Frank Wysor, MD**

Dr. Frank Laird Wysor, who was born in Buckingham County, Virginia, in 1888, died on the Fourth of July at his home in Clifton Forge. He had retired from the practice of ophthalmology and otolaryngology.

After graduating from Washington and Lee University, Dr. Wysor entered the University of Virginia School of Medicine, earning his doctorate in the Class of 1915. He trained at Huntington Hospital in Clifton Forge, then entered the Army for service as a captain during World War I, returning to Clifton Forge to practice medicine.

The 96-year-old physician had been a member of the Alleghany-Bath County Medical Society and The Medical Society of Virginia for over 60 years and belonged also to the American College of Surgeons.

## **H. D. Fitzpatrick, MD**

Dr. Hamilton D. Fitzpatrick, long-time Radford physician, died June 3 at the age of 78. Born in Christiansburg, Dr. Fitzpatrick graduated from Randolph-Macon College and the Medical College of Virginia. He served as a surgeon with the Army in World War II, emerging from the service as a lieutenant colonel, and had been a medical consultant at the Veterans Administration Hospital in Salem. He was a member of the Southwestern Medical Society, The Medical Society of Virginia, the American Medical Association, the American Academy of Family Physicians, and the Association of Retired Army Officers.

## **Martin Markowitz, MD**

Dr. Martin Markowitz, Richmond surgeon, died July 9 at a Richmond hospital after suffering a heart attack at his home. He was 65.

A native of Brooklyn, New York, Dr. Markowitz graduated from the University of Richmond and received both his MD degree and his postgraduate training from the Medical College of Virginia. Dur-

ing World War II he served with the Army Medical Corps as chief of surgery in three hospital units in Japan. Returning to Richmond, he established a private practice and became clinical professor of surgery and clinical associate in gynecology at the Medical College of Virginia.

Dr. Markowitz had belonged to the Richmond Academy of Medicine and The Medical Society of Virginia for 36 years and was a fellow of the American College of Surgeons. He had been president of the Richmond area unit of the American Cancer Society and a board member of the Society's Virginia Division.

## **V. Eric Kemp, MD**

Dr. Verbon Eric Kemp, Richmond cardiologist who pioneered in the field of coronary arteriography, died July 9 of cancer at the age of 57. He was a member of the Medical College of Virginia faculty from 1960 to 1977, when he became a clinical associate professor of medicine and entered private practice.

Born in Lexington, Virginia, Dr. Kemp graduated from the University of Richmond and went on to the Medical College of Virginia for his MD degree and for postgraduate training. Entering the Navy in World War II, he trained also at the US Naval Hospital at San Diego. He held the rank of commander at the time of his discharge, when he returned to Richmond to enter practice.

Dr. Kemp was a past president of the Virginia Heart Association. His professional memberships included the American College of Cardiology and the Society of Cardiac Angiography. He came to membership in The Medical Society of Virginia through the Richmond Academy of Medicine.

## **Charles Latven, MD**

Dr. K. Charles Latven, retired obstetrician and gynecologist and a past president of the Arlington County Medical Society, died July 14 at his home in Arlington after a heart attack. He was 73.

Born in New Jersey and a graduate of Rutgers University, Dr. Latven received his MD degree from Georgetown University in 1936 and completed his internship and residency in New York City. His practice in Arlington spanned almost 40 years.

## Francis McGovern, MD

Dr. Francis Henry McGovern, a past president of the Danville-Pittsylvania Academy of Medicine, died July 10 in the Memorial Hospital of Danville. He was 78.

Born in Milwaukee, Wisconsin, Dr. McGovern established his practice of otolaryngology and ophthalmology in Danville in 1935 after receiving his doctorate of medicine from the University of Pennsylvania and completing his residency at the University of Virginia, where he later became a clinical professor of otolaryngology. For more than 40 years he studied Bell's palsy, contributing some 75 works on the subject to the medical literature.

Dr. McGovern's membership in The Medical Society of Virginia spanned 50 years. He belonged to many other professional organizations, including the American Medical Association, the American Academy of Ophthalmology and Otolaryngology, and the International and American Colleges of Surgery.

## Memoir of Ebbe C. Hoff 1906-1985

By Charles E. McKeown, MD,  
Joseph F. Kell, MD, and Russell Bowers, MD

Dr. Ebbe Curtis Hoff, a native of Rexford, Kansas, died on February 17, 1985, at the Medical College of Virginia Hospital after a lengthy illness. He was 78 years old.

Dr. Hoff received his basic degrees at the University of Washington, Seattle, and at Oxford University in England. Subsequent doctoral degrees in physiology, medicine, and surgery were earned at Oxford and at the London Hospital Medical College of the University of London. He did research in neurophysiology under Professor Sir Charles Sherrington at Oxford and was later Sterling research fellow in physiology at Yale. His clinical work was done at the London Hospital Medical College where he served in various posts during the Blitz of World War II.

Dr. William T. Sanger prevailed upon Dr. Hoff to join the MCV faculty in 1943 as associate professor of neurophysiology. He then served in the Navy at the School of Aviation Medicine in Pensacola, as well as in the Research Division, Bureau of Medicine and Surgery in Washington DC. After serving as assistant naval attache to the US Embassy in London, he left the Navy as a commander (flight surgeon) and returned to MCV in 1946, where he continued his teaching and research in neurophysiology.

In 1948 he was appointed medical director of the Bureau of Alcohol Studies and Rehabilitation under the auspices of the Virginia State Health Department. He served in this capacity until 1976, after which he remained as a consultant. During that time he continued intermittently as professor of physiology and psychiatry as well as dean of the School of Graduate Studies.

Dr. Hoff was a member of Sigma Xi, Phi Beta Kappa, Phi Sigma, Royal Society of Medicine, Alpha Omega Alpha, Royal College of Surgeons, Royal College of Physicians, and several other American and British groups.

He was the author of many scientific articles and books including two volumes on *Aviation Medicine*, three volumes on *Diving and Submarine Medicine*, and a nine-volume edition of *History of Preventive Medicine: US Army, World War II*, on which he collaborated with his wife, Phebe, a fellow Oxonian. He was also the author of *Alcoholism, a Hidden Addiction*.

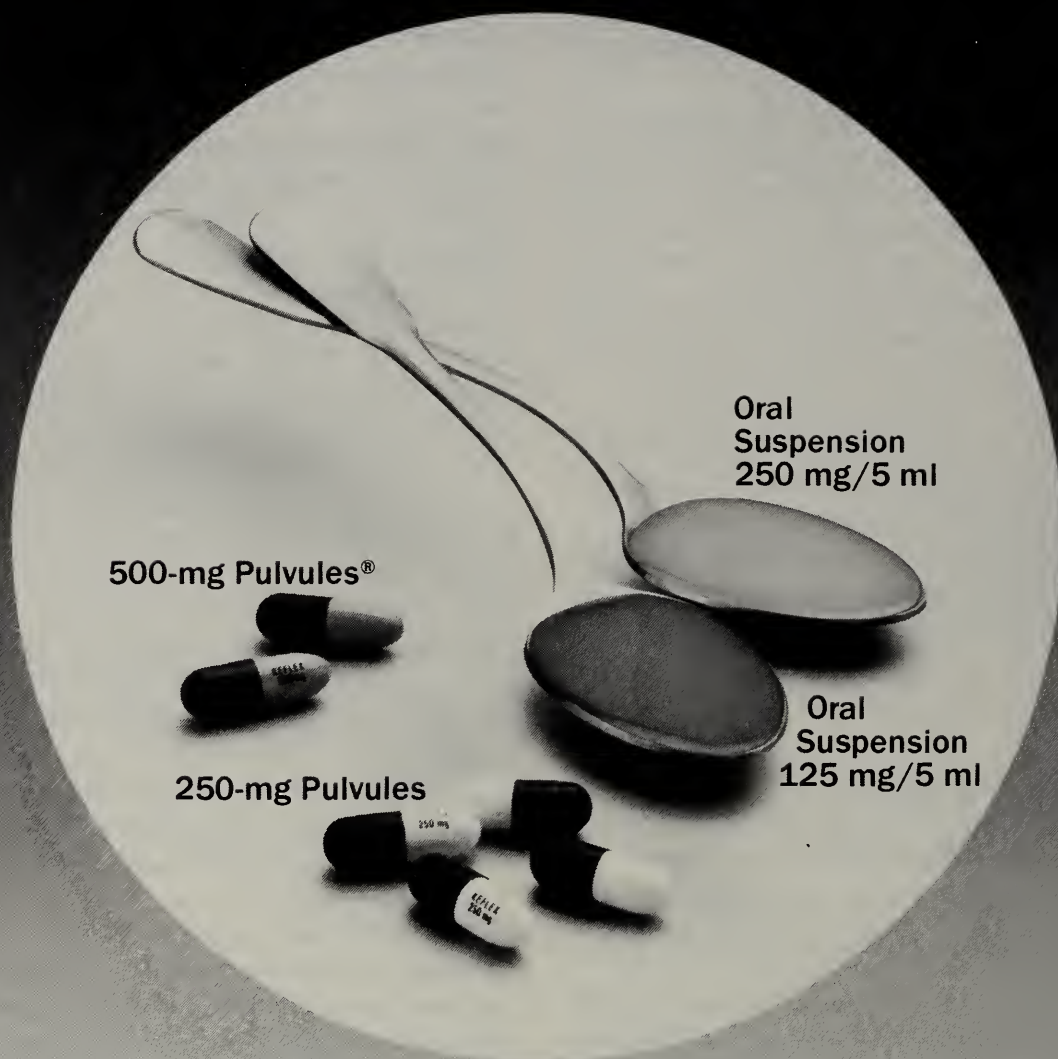
During all this ceaseless activity, Dr. Hoff maintained an avid interest in ham radio, astronomy, and the Baker Street Irregulars, a club of Sherlock Holmes devotees.

He maintained a close personal liaison with his patients, students and staff, and was always willing to share his inestimable knowledge and experience. Advice came frequently, with a twinkle in his eyes and a ready reference to a previous publication or statement. Dr. Hoff was one of the first physicians to recognize and treat alcoholism as a disease, not a disgrace, and to propound this approach in many lectures both here and abroad.

He was an active member of St. Mary's Episcopal Church, where he served as senior warden and Sunday school director. He had been chairman of the Commission on Alcoholism of the Diocese of Virginia and the National Episcopal Church.

Dr. Hoff is survived by his wife, Phebe M. Hoff; his son, David of Toronto; his daughter, Phebe Mae Van Halen of Chicago; two granddaughters; and his brother, Dr. H. E. Hoff of Houston, Texas.

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## ON THE COVER

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A great oak shades The Medical Society of Virginia's headquarters building at 4205 Dover Road in Richmond. Built in 1958 as a one story structure, its roof was raised last winter to create a dormered second story, and the original neo-classic portico was transformed into a porch of colonial persuasion. For a picture of the entire building, see pages 650-651.

*Photo by Tim Wright*

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*Edwin L. Kendig, Jr.*

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Dr. Hotchkiss addressing the AMA's House of Delegates.

*Photograph by Dr. A. A. Kirk*

## William S. Hotchkiss, Leader

**A**T the most recent meeting of the American Medical Association, Dr. William Stuart Hotchkiss was elected Chairman of the Board of Trustees.

In the arena of national medical politics, Virginia has had its share of leaders. There have been four presidents of the American Medical Association. They are Dr. Beverly R. Wellford, Fredericksburg, who was President in 1852; Dr. Hunter Holmes McGuire, Richmond, President in 1893; Dr. Walter B. Martin, Norfolk, President in 1952; and Dr. Richard E. Palmer, Arlington, President in 1977.

The recent election of Dr. Hotchkiss places him in a strategic position. Do we have another president of the American Medical Association in the making? His ability and his experience recommend him.

EDWIN L. KENDIG, JR., MD

# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

### MALPRACTICE COVERAGE REPORT COMING IN NOVEMBER

How many Virginia physicians cannot get malpractice insurance? How many have had their policies cancelled? How many practice bare? To get answers to these and other questions about current coverage in Virginia, the Insurance Committee sent a questionnaire to every physician in the state. The responses came in by the thousands, the data is being tabulated, and Dr. Alvin E. Conner, the committee's chairman, is getting together a report for the November issue. For a special insert brochure in the same issue, Allen C. Goolsby III, the Society's legal counsel, has summarized the principal statutory provisions governing medical malpractice suits in Virginia. If you've been uncertain as to exactly what the medical malpractice laws are in Virginia, this brochure will set you straight.

### NEXT AMA MEETING WITHIN VISITING DISTANCE

Virginia physicians have a rare chance to visit one of the American Medical Association's biannual meetings when the AMA House of Delegates goes to Washington DC for its 1985 interim meeting. The dates are Sunday, December 8, to Wednesday, December 11. The place: the Sheraton Washington. The opening day ceremonies are "always impressive," in the words of MSV delegate **Raymond S. Brown**; Monday the reference committees hold their hearings; and the House is in session on Tuesday and Wednesday. For further information, call Jim Moore at MSV headquarters, (804) 353-2721.

### COUNCILORS HEAR DR. RING ADVOCATE UNIFIED MEMBERSHIP

Once again the subject was unified membership when The Medical Society of Virginia's Council met in special session on August 17 at MSV headquarters. At their January meeting, the councilors endorsed the concept of unification. In May they voted to recommend to the House of Delegates, when it meets on November 9 at the Homestead, that unified MSV-AMA membership be written into the bylaws; meantime, they agreed, the Council should "encourage careful dissemination of information on unified membership to all MSV members." (See Va Med's March and June issues.)

Invited to the August meeting to disseminate information to the councilors was Dr. John J. Ring of the AMA's

Board of Trustees. A past president of the Lake County, Illinois, Medical Society, he is also the AMA's representative to the Joint Commission on the Accreditation of Hospitals. Dr. Ring emphasized the need to unify so that medicine can speak with a strong voice on the national scene. Less than 45% of American physicians belong to the AMA, he noted, and "medicine can no longer afford that luxury."

A slide presentation outlining the activities and goals of the AMA gave graphic support to Dr. Ring's remarks. A shorter slide presentation was in the works, President Harry C. Kuykendall noted; it would lend itself admirably to discussion at component medical society meetings, as would a kit prepared by the AMA, "The Case for Unified Membership." Also, he announced, the Society's AMA delegates were on call to assist with presentations on unified membership.

Two AMA staff members, Nancy Kintzel and Deborah Meyers, described the Mississippi State Medical Association's recent ratification of unified membership, observing that the decision was made by majority vote in that association's House of Delegates. This precipitated a motion to place the issue of unification before a called meeting of the MSV membership after the House of Delegates' session on November 9, but the motion failed of passage. Such a meeting can be ordered by the House of Delegates itself, as explained by legal counsel Allen C. Goolsby III in Virginia Medical's August issue, but would require 25 days notice. The August issue featured commentary on unified membership by six Medical Society of Virginia members: Dr. William S. Hotchkiss, Dr. Richard L. Fields, Dr. Duncan S. Owen, Jr., Dr. Charles L. Cooke, Dr. John A. Owen, Jr., and Dr. Oscar A. Thorup, Jr.

## **WARNING: YOUR LICENSE EXPIRES IN 1986**

When's your birthday? That's when your license to practice will expire in 1986. How to renew? Sixty days before your birthdate the Board will send you a renewal notice; write a check for the fee, put it and the renewal notice in the self-addressed envelope, and toss it into the mail pronto. Failure to receive the notice is no excuse, warns the Virginia Code, so give the Board a call if it has not come to hand by the time you blow out those candles. The renewal ritual is biennial; this one will take you to 1988. The fee has been \$50, but as this was written the Board was considering a raise to \$80. --A.G.

# LETTERS

## **"The AMA needs our unified support"**

The federal government is the most important economic force in American medicine today. When medical policies are determined by uninformed politicians, a deterioration in the quality of medical care always follows. When politicians are better informed, their actions are less destructive. For many years the Washington office of the American Medical Association has been the most effective source of medical information for congress. AMA members have paid for the Washington office, but all

physicians have benefited from its activities. Every physician should join the AMA and pay his fair share of these costs. Membership in the AMA should be required for all members of The Medical Society of Virginia. Eventually AMA membership should be required for membership in all specialty societies for appointments to all hospital staffs, and for appointments to medical school faculties. The AMA works for all of us and needs our unified support.

**James M. Moss, MD**

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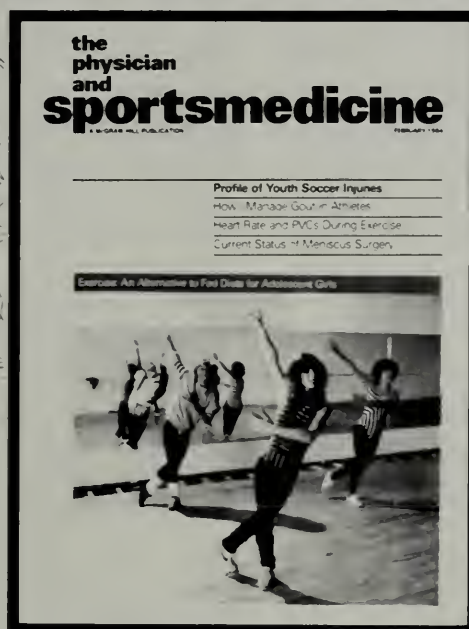
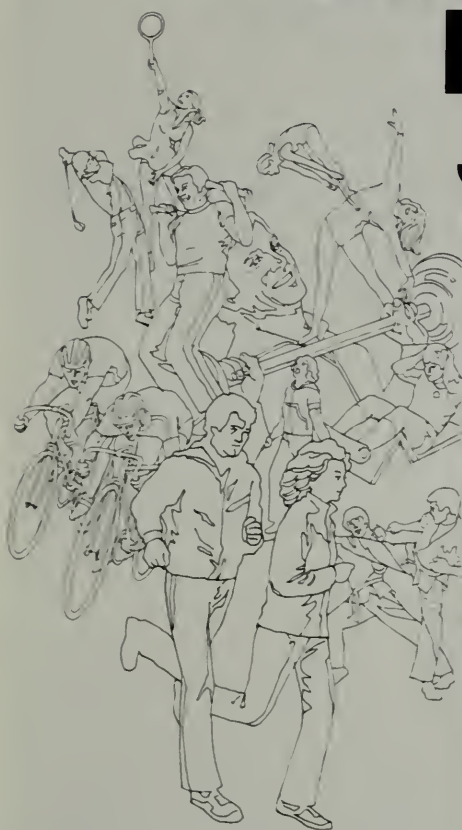
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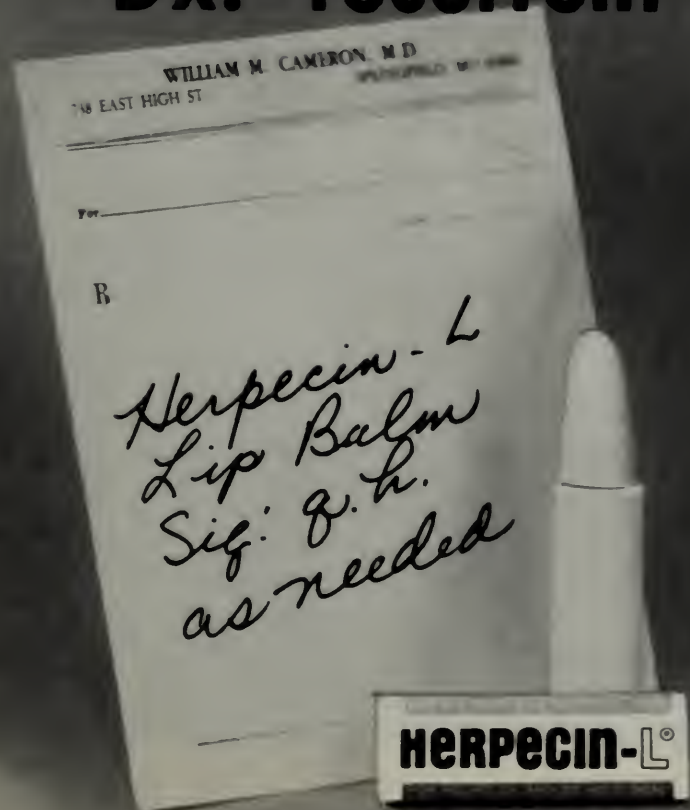
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# Pursuing colorectal cancer questions in Virginia

**I**N the United States this year 138,000 people will be diagnosed as having colorectal cancer; 83,000 of these can expect to die of their disease within five years.<sup>1</sup> Yet 85% of patients who are diagnosed early, when their cancers are limited to the colonic wall and have not metastasized to regional lymphatics or distant organs, can expect to be alive in five years. Nowadays, we have a good understanding of the natural history of the disease. The premalignant precursor of colorectal cancer has been characterized pathologically and high risk clinical groups have been identified. We should be able to improve survival by increasing our efforts to detect and diagnose precancerous as well as early cancerous lesions.

Individuals at greatest risk of colorectal cancer include patients with prior colorectal cancer, longstanding ulcerative colitis and a variety of genetic polyposis syndromes. Screening guidelines (fecal occult blood testing and flexible sigmoidoscopy) have been suggested by the American Cancer Society for high risk and for average risk patients, i.e., all asymptomatic men and women over the age of 40. Special screening is suggested for the high risk group.

Several studies have demonstrated the feasibility of using the fecal occult blood test for the screening of colorectal cancer. Two controlled studies, one at the University of Minnesota and one at the Preventive Medicine Institute-Strong Clinic/Memorial Sloan Kettering Cancer Center, have shown that 60% to 80% of lesions detected in this way are early (Dukes' A or B) lesions.<sup>2,3</sup>

Virginia is unique in that a coalition of primary care physicians from around the state have agreed to take part in the Colorectal Cancer Control Project, a screening program sponsored by the American Cancer Society.<sup>4,5</sup> Considerable data on screening practices of Virginia physicians has already been collected. Over 17,000 patients have been screened—more than 90 adenomas, benign neoplasms considered to be the precursor of colorectal cancer, and over 60 can-

cers have been discovered. The pathology of 45 of the resected carcinomas has been reviewed. Importantly, when screening was performed in asymptomatic individuals, three-fourths of the cancers detected were early Dukes' A or B lesions. In comparison, when symptoms referable to colorectal cancer were present, three-fourths of the cancers detected were advanced Dukes' C or D lesions.

The message is clear! The screening of asymptomatic patients over the age of 40 for colorectal cancer leads to the detection of early lesions which have an improved prognosis, but . . .

Is screening worth it? Physicians seem to have the preception that screening is not worth it.<sup>6</sup> Our study as well as those of others suggests a more optimistic view, but our data is still preliminary. The physicians participating in the Virginia Colorectal Cancer Control Project are actively pursuing an answer to the question. Time will tell if it's worth it.

ALVIN M. ZFASS, MD  
A. SCOTT MILLS, MD  
WEI LI FANG, PhD  
H. J. WANEBO, MD

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From the Medical College of Virginia/Virginia Commonwealth University (Dr. Zfass and Dr. Mills) and the University of Virginia School of Medicine (Dr. Fang and Dr. Wanebo).

## Enlarging the Pool of Flexible Sigmoidoscopists

Daniel M. Gelfman, MD, Michael N. Eppel, MB,  
M. Stephen Mandell, Jr., MD, and Charles G. Evans, Jr., MD,  
*Richmond, Virginia*

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In a self-sustaining program at a teaching hospital, chief medical residents trained in flexible sigmoidoscopy performed adequately as instructors of new trainees when compared to gastroenterologists.

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**I**N SPITE OF increasing efforts to improve therapy, mortality from colorectal cancer is second only to lung cancer in the United States. Surgical therapy for early detected localized lesions yields good results; however, most cancers are detected late, after they have spread. At this point the results of chemotherapy are disappointing.<sup>1</sup> Early detection is therefore the cornerstone of treatment today.<sup>1-4</sup> Moreover, removal of all colorectal polyps appears to decrease the incidence of colorectal cancer,<sup>5-6</sup> and the detection of polyps serves as a marker for patients who are at increased risk of developing colorectal cancer.<sup>3-7</sup>

From the Division of General Internal Medicine and Primary Care (Drs. Gelfman, Mandell and Evans) and the Division of Gastroenterology (Dr. Eppel) at the Medical College of Virginia/Virginia Commonwealth University. Address correspondence to Dr. Gelfman at Box 663, MCV Station, Richmond VA 23298.

When this was written, Dr. Gelfman was a chief medical resident at the Medical College of Virginia; he is now a fellow in cardiology there.

Submitted 7-29-85.

For these reasons, the American Cancer Society has called for sigmoidoscopy of all persons over the age of 50, preferably with the newer flexible sigmoidoscope. The flexible instrument can detect approximately three times more lesions than the rigid endoscope. Ideally, the procedure should be performed by the primary care physician, who then refers patients with polyps for colonoscopy with polypectomy.<sup>8-9</sup>

The average practitioner becomes proficient at flexible endoscopic insertion and lesion recognition, however, only after performing 15-25 supervised examinations,<sup>9</sup> and such intensive training is difficult to obtain once a practitioner is in private practice. In some residency programs, primary care residents are taught to perform flexible sigmoidoscopy;<sup>8</sup> these efforts are limited, however, because there are not enough gastroenterologists with available time for teaching. We decided to train chief medical residents in flexible sigmoidoscopy and then see how well they could teach the procedure to new trainees. This is a report of that study.

It should be emphasized at the outset that our study was intended to determine if the non-gastroenterologists performed adequately as instructors when compared to the gastroenterologists. The study was not designed to demonstrate equivalence.

The study was conducted in the outpatient department of the McGuire Veterans Administration Hospital, Richmond. Two half-day sigmoidoscopy

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clinics were held per week. Chief medical residents who had been trained in flexible sigmoidoscopy, demonstrating competence after 15-20 examinations, served as instructors for one clinic, and gastroenterologists were the instructors for the other. Resident-trainees were scheduled for two-week intervals of instruction, which allowed for 15-20 examinations, rotating through each clinic.

The examinations, with one-on-one instruction using a teaching attachment, were limited to 35 cm. We found it helpful to have the trainee use the hand controls initially, with the instructor manipulating and advancing the shaft of the instrument; after 6-8 exams the trainees could operate the endoscope with only minimal assistance. The endoscope was advanced only with clear visualization of the lumen. Two 60-cm sigmoidoscopes were used, the Olympus OSF 60 and the Pentax 34 AFS. No biopsies were done. An enthusiastic, helpful nurse was present throughout the sessions to help coordinate the clinic and care for the patients and the sigmoidoscope.

Patients were scheduled at a maximum six per

session. They were screened initially for unstable angina or prosthetic heart valves and signed consent forms after the risks and benefits were explained. We found that one or two enemas prior to the procedure was inadequate preparation, so we switched to the Fleet® Prep Kit, deleting the suppository. After the procedure, a summary was dictated and became part of the patient's record.

Only patients undergoing the examination for the first time and examined by a trainee with an instructor were counted in the study. Three chief medical residents and three gastroenterologists served as instructors. Chi Square analysis with Yates correction and Fisher's exact probability were used as appropriate.

Results for the time period July 1984 to April 1985 are shown in Table 1. There were no complications, and patient tolerance in both groups was excellent. There were no significant differences between the two groups in any of the categories compared.

There is no perfect way to compare the performance of two different groups of individuals performing or teaching flexible sigmoidoscopy without subjecting patients to examination twice. It is reasonable, however, to compare them based on depth of endoscope insertion and findings during examination if they examined similar patient populations. The patients in our groups were similar with respect to age and symptomatology.

To compare the depth of scope insertion, we chose 15 cm, because this is the area that is poorly visualized on barium enema, and 35 cm, because this is a safe and reasonable end point for new

**Table 1. Comparison of Performance of Instructors of Flexible Sigmoidoscopy.**

	Chief Medical Residents	Gastroenterologists
Number patients	41	94
Average age	57 yrs	57 yrs
Symptomatic	97.6%	94.7%
Reached 15 cm	100.0%	100.0%
Reached 35 cm	80.5%	91.5%
With polyps	22.0%	21.3%
With diverticula	7.3%	1.1%

examiners.<sup>8,10</sup> Hemorrhoids were not counted. Abnormal, inflamed mucosa was not used as a criteria.

Although this is a limited study, we believe the observation can safely be made that the chief medical residents in this program performed adequately as instructors of flexible sigmoidoscopy when compared to the gastroenterologists. We suggest, therefore, that self-sustaining programs to train medical residents in flexible sigmoidoscopy may well be feasible, using chief medical residents or other general internists as instructors, if the program is designed with suitable safeguards. The recommendations of the American Cancer Society could then be more widely followed, through the additional primary care physicians trained in flexible sigmoidoscopy during their residencies. Hopefully, this could result in a decrease in the morbidity and mortality of colorectal cancer.

The authors thank Dr. Douglas Heuman, Dr. Bassam Saffouri, and Dr. Alvin Zfass of the Medical College of Virginia's Division of Gastroenterology and Barbara McLaughlin, LPN, for their assistance, and the Olympus Corporation of America for the loan of a flexible sigmoidoscope.

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## ABSTRACTS

*The following abstracts derive from the Scientific Program of the Medical Society of Virginia's 138th Annual Meeting at the Homestead, Hot Springs, on November 8 and 9.*

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**The Pathology of Ovarian Cancer.** Robert J. Falconer, MD, *Norfolk*.

The epithelial cancers of the ovary of high incidence (serous, mucinous and endometrioid) will be addressed. Stress will be placed upon those criteria for malignancy that serve as guides to therapy. The role of pathologic and clinical staging of the common epithelial cancers will be emphasized as a vital factor in management.

**Ovarian Cancer: What the Operating Surgeon Should Do.** Paul J. Underwood, Jr., MD, *Charlottesville*.

Any surgeon who opens the abdomen of middle-aged females will sooner or later find an unsuspected ovarian malignancy. This presentation will attempt to outline the approach to management of that patient in the operating room. In general, an attempt should be made to resect all gross disease or at least debulk the gross disease until no nodule greater than 1 cm remains. Carcinoma of the ovary spreads early by seedings to the omentum and right leaf of the diaphragm; an incision to permit adequate exposure and evaluation of these two areas is mandatory. Cell washings from the diaphragm and both gutters are ultra helpful if no gross disease is recognized in the upper abdomen. In general, carcinoma of the ovary does not penetrate the pelvic peritoneum; therefore a retroperitoneal approach to a fixed pelvic mass will usually permit removal of what used to be called an inoperable lesion. An intraperitoneal approach will be unsuccessful in these types of lesions and result usually in massive hemorrhage. If the tumor can be debulked by removing a segment of sigmoid colon, with minimal disease left in the upper abdomen, it should be done. Usually the sigmoid colon can be reanastomosed at the peritoneal reflection without performing a colostomy. If the lesion is totally resected without any gross disease remaining in the abdominal cavity, paraortic and pelvic lymph nodes should be sampled to confirm total resection of disease. Although surgical resection is the primary treatment for carcinoma of the ovary, essentially all

patients should receive secondary therapy in the form of chemotherapy or irradiation. The borderline tumor, especially in the young female, is an exception to the above. The previously outlined procedures are only for epithelial tumors of the ovary and do not apply to germ cell or stromal tumors, where a more conservative approach can be taken.

**Ovarian Cancer: Management by Radiation Oncology.** C. Ronald Kersh, MD, *Richmond*.

Despite great advances in the field of gynecologic oncology in the past 30 years, results of therapy for carcinoma of the ovary have been disappointing. Ovarian carcinoma is currently the leading cause of death among gynecologic oncology patients with an estimated 11,600 deaths in 1985. Surgical therapy remains the mainstay of treatment in ovarian carcinoma; however, radiotherapy is an effective adjuvant. The decision for adjuvant therapy should be made through a multi-modality team utilizing the gynecologic oncologist, medical oncologist, radiotherapist and pathologist, and should be individualized for each patient. A recent investigation from the Princess Margaret Hospital has demonstrated the effectiveness of precision abdomino-pelvic radiotherapy. The current technique employed is whole abdominal radiotherapy for 2250 cGy as this technique has been demonstrated to have less complications than the moving-strip therapy previously utilized. Other techniques currently under investigation include the use of intraperitoneal radioactive isotopes, such as P-32. The results of clinical trials and treatment techniques will be presented.

**Magnetic Resonance Imaging.** Charles D. Teates, MD, *Charlottesville*.

Nuclear magnetic resonance has been used in chemical analysis for almost 40 years. In the last decade, it has become a clinical reality. This paper will briefly introduce the concepts of magnetic resonance, summarize experience at the University of Virginia during the first nine months of operation, and provide an overview of clinical applications.

**Rehabilitation of the Stroke Patient.** Douglas A. Wayne, MD, *Richmond*.

Different types of stroke patients need different types of rehabilitation. In all stroke patients rehabilitation intervention is of vital importance. Stroke rehabilitation needs a dedicated team which will work in an interdisciplinary manner. The vast number of stroke patients can be rehabilitated to a state

of independence, but the rehabilitation potential is influenced by such factors as presence of a supportive family, intellectual capacity, continence, right- or left-sided strokes, degrees of spasticity and flaccidity. Statistics show that the incidence of stroke is declining. Good studies as regards the effectiveness of rehabilitation in stroke are still lacking. It is important in the rehabilitation of stroke to measure quantitatively the quality of life of these patients.

**Advances in the Diagnosis and Treatment of Breast Cancer.** Richard G. Lester, MD, *Norfolk*.

The past decade has seen major advances in the early diagnosis of breast cancer, in the therapy of the disease and in the fundamental understanding of the underlying processes. The results of these achievements include the opportunity of treating breast cancer with methods that preserve body image and function as well as improving cure rates in this most common of cancers affecting American women. This paper will review advances in diagnosis and therapy in the light of new knowledge of breast cancer biology and will also point to opportunities for advances in the next decade.

**Major Depressive Episode: Diagnosis and Treatment.** James L. Mathis, MD, *Greenville, South Carolina*.

The most frequently described illness in ancient literature, depression, became treatable first in the 1930s with the advent of ECT. It became treatable in office practice in the 1950s when antidepressants became available. Proper treatment requires differentiation from despondency, grief and secondary depression, each of which responds to a different approach. Treatment includes assessment for suicidal potential, psychotherapy, and medication. 75%-80% will recover, 10% to 20% will recover partially, and 5% will not recover. Exceptional cases may require hospitalization and/or ECT. Newer laboratory tests remain primarily research tools with little clinical utility.

**Mycosis Fungoides, a Cutaneous T-Cell Lymphoma (CTCL): Management and Systemic Consequences.** Eugene J. Van Scott, MD, *Philadelphia*.

The objectives of treatment of CTCL should be established with awareness of acute and long-term adverse effects of treatment. Adverse effects occur in proportion to the number of therapeutic agents used, and to the intensity of their use. Curability of disease is improbable with current therapy, whereas control of disease is probable with current therapy, which consists of topical agents (corticosteroids, UV, PUVA, HN2, electron beam and

X-rays). Systemic therapy consists of single chemotherapeutic drugs and drug combinations. Health impairments due to the disease itself and concomitant pathologic events are both cutaneous and extracutaneous. Cutaneous impairments include disfigurement, discomfort and dysfunction. Extracutaneous impairments are due to disease involving *any* organ. Health impairments due to treatment can be equally or more devastating than those due to the disease. Cutaneous sequelae of treatment include degenerative changes, e.g., atrophy, telangiectasia, and neoplastic lesions, e.g., premalignant keratoses, keratoacanthomas, squamous cell carcinomas. Systemic impairments due to treatment can be hematologic, immunologic, hepatic, pulmonary, neurologic, sexual and those due to secondary malignant neoplasms.

Progress of the near future includes information on possible determinants of the disease, e.g., HTLV virus, and perhaps improvements in treatment, e.g., leukopheresis, interferons, serotherapy, and other pharmacologic agents.

**Balloon Angioplasty.** Charles J. Tegtmeier, MD, Charlottesville.

During the past 7 years we have performed more than 200 percutaneous transluminal angioplasty (PTA) procedures at the University of Virginia. Results have been analyzed in the first 149 patients with 198 renal artery stenoses. All of the patients have been followed clinically, and followup studies included repeat angiography, renal vein renin sampling, and, in many, nuclear studies. The mean diastolic pressures decreased 37.0 mm Hg for the group of hypertensive patients. 121 of the 130 patients dilated primarily for hypertension have shown improvement following dilatation. All of the patients with fibromuscular dysplasia have shown improvement. 28 of the patients with renal insufficiency have shown improvement in renal function. The results show that renal angioplasty is a viable therapeutic alternative and should be considered the treatment of choice in fibromuscular dysplasia and in short isolated atherosclerotic lesions.

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# ANNUAL



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## AMA Delegates

The 140th Annual Meeting of the American Medical Association was held in June, and six delegates and six alternate delegates from The Medical Society of Virginia attended. In addition, the President, President-Elect and Speaker of the House, as well as representatives from the Hospital Medical Staff Section and the student medical societies, met with the delegation.

Dr. William S. Hotchkiss, Past-President of the Society and the Norfolk Academy of Medicine, was elected Chairman of the AMA Board of Trustees. Prior to his election to this high honor, he served on the AMA Judicial Council and has been a member of the Board for seven years.

The House addressed a number of key issues, and AMA finances and the need for additional dues revenue was debated extensively. The House of Delegates adopted a \$45 increase in regular membership dues, effective January 1, 1986.

Another major topic for discussion was professional liability. Particularly addressed were the problems facing obstetricians, gy-

The asterisks in the index above signify standing committees. In accordance with the Society's Bylaws, these reports will be referred to the House of Delegates at the Annual Meeting.

The other reports were referred to Council for consideration at its meeting late last month.

necologists and other physicians practicing in Florida. The House requested that the AMA continue to address this high-priority issue.

The House received a progress report on the AMA's effort to secure a grant from the Health Care Financing Administration to develop a resource cost-based relative value scale for physicians' services. The report outlined that a relative value scale is not a fee schedule and that the AMA will continue its strong opposition with reference to the implementation of any mandatory fee schedule.

In conclusion, I encourage AMA members to attend the Interim Meeting to be held in Washington,

DC, December 8-11. This would provide you with an opportunity to see the Reference Committees and the House of Delegates in action on a firsthand basis.

**Michael A. Puzak, MD,**  
Chairman

## Auxiliary Advisory

In recognition of the impact that public opinion has on the health care system and on legislation affecting the profession, Garland Bigley, Auxiliary President, has urged component auxiliaries to pay special attention to press coverage of philanthropic activities. Adequate coverage of events will increase public awareness of programs while increasing the usefulness of the Auxiliary in each community.

As part of its effort, the MSVA obtained radio and TV public service announcements from the AMA that are designed to dispel myths about aging. A new tag line, created by Video Visions Communications at no cost to the MSVA, credits both the AMA and the MSVA with sponsorship. The an-

The chairmen of The Medical Society of Virginia's committees were invited to the special, two-day meeting of Council in June (cf Va Med 1985;112:350), there to make interim reports. These photographs and the one of Dr. Barney on page 652 were made at that meeting.

Clockwise beginning at the right: Dr. T. Eugene Temple, Chairman, Education Committee; Dr. Jefferson D. Beale, Chairman, Child Health Committee; Dr. William J. McAveney, Chairman, Highway Safety Committee; Dr. William D. Mayer, reporting for the Scholarship Committee; and Dr. W. Kenneth Blaylock, Chairman, Scientific Program Committee.



nouncements have been aired on major stations in Central Virginia and will be available for use in other areas of the state.

Additionally, planning is underway for implementation of an Auxiliary Speakers Bureau. President-Elect Barbara Vick is working with the Society's consultant, Ed DeBolt, and two workshops have been scheduled this fall for some 70 participants. Speeches will be delivered beginning in late 1985. Topics will deal with cost of care and the impact of malpractice litigation.

Virginia was cited by the AMAA for having attained an increase in membership this year. Membership now stands at 2,171. In order to insure another increase in 1986, Membership Chairman Heidi Guerrero designed a membership recruitment page for VIRGINIA MEDICAL.

AMA-ERF checks were presented to the deans of the three Virginia medical schools last spring. The University of Virginia received \$15,604.86; the Medical College of Virginia, \$17,582.63; and Eastern Virginia Medical School,

\$14,062.22. AMA-ERF contributions from Virginia for 1985 totalled \$51,293.78, with state and local auxiliaries raising \$42,183.78 and physicians contributing \$9,110. Virginia placed ninth in the nation, according to the AMAA.

In addition to "A Day at the Capitol," the MSVA stimulated interest in legislative affairs by featuring Del. John G. Dicks principal speaker at its Mid-Year Board of Directors meeting. Delegate Dicks' appearance spawned an interest in the proceedings of the House Subcommittee on Malpractice and

## "An exciting year of growth"

**T**HIS has been an exciting year which has kept the staff at Society headquarters, extremely busy, as well as our President, Dr. Harry C. Kuykendall, Society officers, Council, and consultants. The Council will have met on five occasions by the time of the Annual Meeting and the first two-day in-depth Council meeting was held in May. The Society's unified membership educational program was launched, contact with the congressional delegation increased, training sessions for both Auxiliary and physician speaker's bureau participants were held, and at the 1985 session of the General Assembly the Society provided positive input.

The May meeting was well attended by our committee chairmen, presidents and/or representatives from our component medical societies and specialty organizations. Council mandated the president to make Society members aware of unified membership in the American Medical Association prior to its consideration by the House of Delegates in November. The project officially began at a special called meeting of Council on August 17. The Council and AMA delegates were briefed on the program and plans for contacts with component societies and hospital medical staffs throughout the state were coordinated.

One of the highlights of the year was the annual pilgrimage of our leadership to Washington to meet with the congressional delegation. Dr. Kuykendall delivered an outstanding address—so dramatic in fact, there was a quietness in the room rarely experienced. One could hear a pin drop and if you

have not had the opportunity to read his remarks, I call your attention to the July issue of VIRGINIA MEDICAL.

The past twelve months have seen a great deal of activity in the area of federal legislation. The Medical Society of Virginia has worked closely with the American Medical Association and the congressional delegation, particularly regarding the issue of physician reimbursement for Medicare patients. A Key Contact Program was initiated; it involved physicians in all congressional districts and generated many letters and a tremendous amount of phone calls to our congressional delegation with reference to the extension of the Medicare freeze.

Another highlight of the year was the creation of two subsidiary corporations of the Society. The Medical Society of Virginia Service Corporation was organized as a for-profit corporation. The organization is still in its formative stages and more information will be forthcoming at a later date. The Medical Society of Virginia Foundation was also founded. It is a non-stock corporation, exempt from federal income tax under Section 501C-3 of the Internal Revenue Code. It could be the vehicle for student loans should the House elect to establish a loan fund.

The complex issue of professional liability and the frequency and severity of claims is an area that concerns us all. The joint subcommittee established by the General Assembly was continued this year to complete an indepth study of Virginia's medical malpractice laws. Through the efforts of the Soci-

meetings of that subcommittee are now being monitored by the MSVA. Sen. Paul S. Tribble, Jr., will address the MSVA at its President's Luncheon on November 8 at the Homestead.

Secretarial assistance provided by The Medical Society of Virginia continues to be of great benefit to the Auxiliary. The Auxiliary most grateful for the administrative as well as financial help received from the Society.

**W. Leonard Weyl, MD**  
**Harold L. Williams, MD**  
**Percy Wootton, MD**

## Cancer

Meetings of the Cancer Committee were held on March 20 and September 18 to consider program objectives and topics referred to the Committee.

A principal activity for the year included the promotion of the Colorectal Cancer Control Project; which by the end of 1984 reported 12,420 patients screened by more than 150 physicians, with a yield of 44 malignant tumors and 65 colorectal polyps. The Committee, in conjunction with the Professional

Education Committee of the American Cancer Society, Virginia Division, presented a program on colorectal cancer to the general membership as part of the scientific program of The Medical Society of Virginia on November 9, 1984.

The Committee lent active support to the efforts of the Virginia Tumor Registry to obtain registration of all patients in the commonwealth with new primary cancers. As of March 1985 there was a total of 112,218 patients entered in the Central Registry File, all of whom are under active surveillance

ety's Committee on Medical Malpractice, we have testified before the subcommittee on many occasions and it is hoped that the final report will not recommend any drastic changes in Virginia law.

Just recently we have been made aware of some physicians who cannot obtain professional liability insurance and through the Society's Insurance Committee a survey has been mailed to all physicians throughout the Commonwealth on the availability of coverage.

In keeping with the action of the House during its last session, the Society established a committee to study the disciplinary functions of the State Board of Medicine. The committee, chaired by Dr. Charles M. Caravati, Jr., has worked diligently and, through a subcommittee, has developed recommendations to be submitted to the House in a supplemental report.

The Medical Society of Virginia Review Organization officially began its operation on October 15, 1984, and from all indications, has worked extremely well. The Society has been kept well informed on its peer review activities through Dr. Robert A. Morton, President, Dr. Eugene F. Poutasse, Medical Director, and Mr. Freeman H. Vaughn, Executive Director. A most informative newsletter was developed, making all physicians in Virginia aware of the organization's activities. The president of the Society annually appoints the members of the board of directors and the Society has three voting members on the Board: President, President-Elect, and Immediate Past-President. A number of contracts

for private review are now in effect and the organization has established six regional offices.

The Medical Society of Virginia can be proud of its increase in membership. In my association with the Society during the past 19 years, I have seen the membership grow from 3,432 to 6,817. Through the efforts of the Long-Range Planning Committee and our consultants, we surveyed the non-members this year. Over 200 requested additional information; as a result, new member applications are being received.

We began renovation of the attic area at Society headquarters in September 1984. Construction was completed in January, thus increasing our overall staff facilities by approximately 2,000 sq. ft. There is no doubt, from the many compliments from our surrounding neighbors, that the new roof line with six dormers and renovation of the portico has enhanced our property. The cover of this issue speaks for itself!

In summary, this indeed has been an exciting year. I would be remiss if the diligent work of our committee chairman and members was not mentioned. They have worked long and hard for the betterment of our Society. You will wish to read the committee reports as they outline the various activities and accomplishments during the past year. Yes, an exciting year of growth, involvement and participation. Throughout it all, the Society still remains financially sound—a fact of which the entire membership can be proud.

**JAMES L. MOORE, JR.,**  
**Executive Vice President**

through the Registry. Committee members testified on July 15, 1985; before a joint subcommittee of the General Assembly in support of continued partial federal support of the Tumor Registry from block grant funds. It is now evident that 80%-90% of Virginians with newly diagnosed cancer are being entered in the Registry.

The Committee continued its quarterly contributions, "Cancer Trends," to VIRGINIA MEDICAL.

The Committee reaffirmed its prior position in opposition to the use of heroin for the control of intractable pain in cancer patients with advanced disease, citing alternative, equally effective methods of pain control.

A program on "Contemporary Approaches to Ovarian Cancer" will be sponsored by the Committee, in conjunction with the American Cancer Society, at the annual meeting in November. This will feature the newest diagnostic techniques and the role of the several therapeutic modalities in the cure and/or management of the most prevalent ovarian cancers.

**Robert J. Faulconer, MD,**  
Chairman

## Child Health

### Recommendation

**That The Medical Society of Virginia oppose any efforts to substitute interscholastic athletics for required health and physical education programs in the high school curriculum.**

The Curriculum and Instruction Committee of the Virginia Board of Education has suggested that consideration be given to substituting interscholastic athletics for required health and physical education courses in the secondary public school curriculum. The Committee not only opposes such a substitution but further endorses

the strengthening of health and physical education programs in schools to include greater emphasis on personal hygiene and increased awareness of the dangers of alcohol, tobacco, and substance abuse. Many felt that the deemphasizing of health and physical education courses would be very unwise. They were further opposed to rolling back (to the ninth grade) the grade level for which students would be required to enroll in health and physical education courses (currently it is mandated through the tenth grade).

### General

The Committee studied two reports received from the American Medical Association. One was a report of maternal and child care of the AMA Board of Trustees. The other was the report of the Council on Scientific Affairs dealing with the AMA diagnostic and treatment guidelines on child abuse and neglect. The Committee expressed concern that the health care of all Virginia children and adolescents are not being met.

We discussed the financial-need criterion established by the State as a guideline used to qualify families of needy children for medical care. While the Medicare program is doing a significant job, the committee felt that the legislature in Virginia should focus greater attention on all children who are not receiving proper medical care.

At the time of the spring meeting of the Child Health Committee, there was a report of a shortage of the DPT vaccine in Virginia. Virginia's law requires that students show evidence of receiving necessary inoculations (including DPT) before enrolling in school. Many pediatricians and family practitioners have expressed concern that the Virginia State Department of Health has recommended that students be matriculated in school

whether or not the necessary vaccines have been administered. It is your Committee's understanding that the DPT vaccine is now readily available and should not present any problems for student enrollment.

Finally, your Chairman had the privilege of representing The Medical Society of Virginia at a conference sponsored by the American Medical Association on child abuse. Your Committee discussed the subject and supports the concept of appropriate state agencies providing a followup to those physicians who make an initial report of suspected child abuse. The Committee also recognized the paramount importance of the child's welfare being considered by the court and state agencies when dealing with situations of abuse and greatly emphasizes the educational aspects of child abuse through the public school system and to the public.

**Jefferson D. Beale, Jr., MD,**  
Chairman

## Education

The Education Committee met twice in Richmond in the past year. The retirement of Dr. Kinloch Nelson on January 1, 1985, from his position as coordinator of continuing medical education was accepted with regret. Dr. Ernest P. Buxton, Jr. agreed to become the coordinator and was introduced at the January meeting.

Dr. Nelson reported on the ACCME Site Survey at headquarters in November, 1984. Certain changes in the policy and procedures of the Committee were advised, but the ACCME has awarded another six years of accreditation to The Medical Society of Virginia. Thus we may continue to accredit hospitals and organizations in the commonwealth to pro-

vide continuing medical education.

Dr. Crowder reported on the survey of Potomac Hospital, Woodbridge, and recommended reaccreditation for four years. This was approved and forwarded to ACCME.

Dr. Melvin Small, director of continuing medical education for the Northern Virginia Consortium, retired from this position and was replaced by Dr. C. Robert Meloni. Both Dr. Small and Dr. Meloni are former members of this Committee.

The meeting of the Committee in April was devoted to consideration of the problems of physician supply and foreign medical graduates. We were fortunate to have the three medical schools represented by their deans to discuss these multifaceted and interrelated problems. Further study will be devoted by the Committee, but at the President's request the initial deliberations of the Committee were presented to Council in May.

A questionnaire was mailed on July 19 to Society members who have not yet attended a seminar, to determine whether there is sufficient interest to constitute a one-day meeting in Williamsburg on Saturday, November 23.

Response to the request for CME reports for 1982, 1983 and 1984 has been the best at this point since the program began in 1979. Of the 1,952 members in alphabetical Group III, those whose last names begin with the letters O through Z, nine have problems subject to review by the Membership Committee. As of August 5, 1985, fifteen had not reported. All delinquents will be reviewed by the Membership Committee before January 1, 1986.

Accredited organizations in Virginia: American Cancer Society, Virginia Division, Richmond; Community Hospital of Roanoke Valley, Roanoke; Eastern Virgin-

ia Medical School, Norfolk; Fairfax Hospital Association, Falls Church; Lewis-Gale Consortium, Salem; Medical College of Virginia, VCU, Richmond; Medical Society of Virginia, Program Committee, Richmond; Memorial Hospital, Danville; Northern Virginia Consortium for CME, Alexandria; Potomac Hospital, Woodbridge; Riverside Hospital, Newport News; Roanoke Memorial Hospital, Roanoke; St. Luke's Hospital Consortium, Richmond; University of Virginia, Charlottesville; Virginia Beach General Hospital, Virginia Beach; Virginia State Department of Health, Richmond; Winchester Memorial Hospital, Winchester.

**T. Eugene Temple, MD,**  
Chairman

## Highway Safety

### Recommendations

**1. The Medical Society of Virginia continue to support a law requiring the use of seat belts for drivers and passengers of vehicles in Virginia.**

**2. A letter from the President of The Medical Society of Virginia be sent to all component medical society presidents requesting they write (using a sample letter) to the chief of their local or county police department urging strong enforcement of the child restraint law.**

**3. The Medical Society of Virginia continue to support legislation that the blood alcohol level for conviction in drunk driving be changed from .15% to .10%.**

**4. Immunity be provided for any physician who in good faith reports a patient to the Department of Motor Vehicles under such circumstances as poorly controlled convulsive disorders, where the physician feels the patient is unfit to drive and presents a hazard to public safety.**

**5. That the DMV require a two-**

**year physical and hearing test for any driver over 75 years of age based on an interview with a DMV examiner who would observe the elderly driver when he/she came to renew his/her license to assess the need for further evaluation; e.g., a physical examination.**

**6. The continued support of the use of seat belts in school buses. It also recommends as first priority stricter enforcement of the law relating to the passing of school buses by motor vehicles, continued installation of stop arms, and larger convex mirrors on the outside of buses.**

Your Committee has approved a final draft of an amended school bus driver physical examination form as authorized by the House of Delegates in 1984. The form has been submitted to the Virginia State Department of Pupil Transportation Service for implementation.

**William J. McAveney, MD,**  
Chairman

## Hospital Staff Section

An organizational meeting to initiate the Hospital Medical Staff Section (HMSS) in The Medical Society of Virginia was held coincident with the 1984 Annual Meeting of The Medical Society of Virginia. Attending this session were representatives from 35 hospitals in Virginia. A keynote address was provided by Dr. Charles Stamey, vice-chairman of the American Medical Association's Hospital Medical Staff Section. Discussed were the possible goals and objectives of a statewide hospital medical staff section. There were hospital medical staff representatives from each councilor district in Virginia, each nominating a representative to serve on a steering committee to develop a HMSS in Virginia.

The Steering Committee of the Hospital Medical Staff Section met in the spring of this year to draft the bylaws of the HMSS. The bylaws enumerate the purpose, objectives, and membership requirements for the HMSS and provides a working document for election of officers and members of the board of directors.

The first annual meeting of the Hospital Medical Staffs Section will be held at the Homestead on November 7, 1985, prior to the opening session of the House of Delegates of the Society. This year's meeting will feature a keynote address from Dr. Charles Peebles, chairman of the American Medical Association HMSS. Following Dr. Peebles' address will be an open forum with those hospital medical staff representatives who attend the session. The meeting will be concluded with the election of members of the board of directors and officers. Every hospital in Virginia is strongly encouraged to send a representative to this first annual meeting of the section.

The primary purpose of the HMSS is to provide a direct means to address the relationship between members of The Medical Society of Virginia and hospital medical staffs and to facilitate communication between members of the American Medical Association and Virginia hospital medical staffs.

**George J. Carroll, MD,**  
Chairman

## Insurance

The Insurance Committee met in the spring of 1985 and plans to meet again prior to the 1985 Annual Meeting.

Your Committee continues to closely monitor the utilization and experience of the various insurance programs offered to the membership. The Society renewed its

sponsorship of the group health insurance program underwritten by Blue Cross/Blue Shield of Southwestern Virginia effective January 1, 1985. The Committee also appointed the David A. Dyer agency as the administrator for the Blue Cross/Blue Shield plan. The Dyer agency will handle enrollment, billings, marketing, and other general administrative responsibilities. Blue Cross/Blue Shield will continue to underwrite and handle all claims.

The Virginia experience for those physicians carrying St. Paul Fire and Marine Professional Liability coverage was favorable during 1984-1985. The rate filing submitted by St. Paul in May reflected a request for an average rate level increase of 16% in physicians' and surgeons' malpractice coverage. This average falls within a range of adjustments from 6.5% (decrease) to a +48.7% (increase). This compares favorably to the 30%-35% on average adjustment St. Paul is requesting in other states in which they write business. Additionally, St. Paul's filing recognizes the creation of a new rating class for urgent-center physicians and the family physician performing obstetrics. Our actuarial firm, Tillinghast, Nelson and Warren, of Atlanta, reviewed St. Paul's experience and discussed it with the Committee prior to the filing. St. Paul's rate filing, originally intended to be effective on July 1, 1985, was withdrawn by the carrier because of technical differences with the Virginia Bureau of Insurance. A second filing has been made with the Insurance Commissioner's office and as of this writing is expected that the effective date of the new premium increases will be September 1.

The David A. Dyer agency continues to administer a variety of excellent insurance products to our membership. New this year is a

health insurance offering to medical student members of the Society. Offerings continue to be made from the Dodson Insurance group for workers' compensation insurance, and Benefit Concepts, Inc. continues to consult and advise members on pension products for both the incorporated and non-incorporated physician. Members of the Society are encouraged to submit comments and recommendations to members of the Insurance Committee concerning modifications and changes of current or preferred insurance offerings.

**Alvin E. Conner, MD,**  
Chairman

## Legislative and Vanguard

### Recommendations

The Legislative Committee recommends 1. The continuation and support of the Physician Visitation Program to the General Assembly sessions.

2. Medical Society of Virginia members should get to know the legislative aides of their senators and delegates—take them to lunch.

3. Members should have an active, ongoing relationship with members of the General Assembly—serve on the Election and Finance Committees.

The Vanguard Committee recommends active support of the Key Contact Program, which was so successful in 1984 in defeating mandatory assignment in Congress.

During July 1985 the program worked exceptionally well in the 3rd congressional district, where we were able to generate 50 telephone calls to Congressman Bliely's office in an eight-hour period. It is the most effective lobbying tool we have at the federal level, functioning very simply on the basis of a telephone "tree." We urge members to volunteer to serve on

the Key Contact Program in their districts.

### General

For the first time in history the Legislative and Vanguard Committees met together, on April 20, 1985, at Society headquarters. Reports of the General Assembly sessions were received and reviewed. Carryover legislation and projected health-related bills for 1986 were discussed. The Legislative Committee will have a supplemental report for the House of Delegates detailing a packet of legislative proposals considered by Council at its August meeting.

The Vanguard Committee has had an ongoing study of the federal budget. The Committee is to review the study before the annual meeting, and a supplemental report will be made to the House.

Percy Wootton, MD,  
Chairman

## Long Range Planning

### Recommendations

1. That The Medical Society of Virginia have a study of its sponsored insurance programs as to whether or not the Society continues to sponsored these programs, either wholly or in part.

2. That The Medical Society of Virginia include in the study the continued use of an agency or to serve as its own agent/broker.

3. That a study be conducted to review the existing insurance programs as to how these compare with other association products—quality of coverage, rates, etc., and how to best serve the membership in this regard.

4. That Johnson & Higgins of Virginia, Inc., be contracted to conduct the study at a cost not to exceed \$5,000.

The Committee has met on two occasions this year and one of the

main topics for discussion was a study of the Society's sponsored insurance programs. It was the consensus of the Committee that the study would have great benefit to the Society and a number of questions were raised. It was agreed to contact three consulting firms with reference to the proposal and refer the recommendations to Council and the House of Delegates.

George M. Nipe, MD,  
Chairman

## Maternal Health

### Recommendation

The Committee recommends that The Medical Society of Virginia adopt the following recommendations in Report V of the Board of Trustees of the American Medical Association on Maternal and Child Health: 1) Consider the 33 recommendations of the Surgeon General's Workshop on Maternal and Infant Health in the development of policy. (Many of these recommendations are included in the Virginia Perinatal Plan.) 2) Oppose any further decreases in funding levels for maternal and child health programs. 3) Encourage more efficient use of existing resources for maternal and child health programs. 4) Encourage the federal government to allocate additional resources for increased program evaluation within maternal and child health block grants. 5) Urge increased participation of physicians in the implementation of block grants.

### General

The Maternal Health Committee, which is concerned with all facets of maternal health, met on July 11, 1985.

An update on activities was given by Dr. Alice Linyear, director of the Bureau of Maternal and Child Health. The prevention of infant

mortality is a primary concern of the State Health Department due to Virginia's high infant mortality rate, which was 12.3/1000 live births in 1983 and 1984. To try to decrease the infant mortality rate, certain programs have been undertaken. A legislative task force to study the prevention of infant mortality in Virginia is holding hearings throughout the state. The Department of Health is proposing a study on infant deaths similar to the maternal death study. Four preterm birth prevention programs under the direction of the Medical College of Virginia, University of Virginia School of Medicine, Eastern Virginia Medical School and Roanoke Memorial Hospital are now in operation. Additional maternal and child health funds and federal funds have been awarded and will be utilized to establish statewide public nutrition efforts and outreach programs.

A summary of the term fetal death study was presented. It was felt that many of these were preventable. The findings will be presented to the directors of the perinatal centers so they may be used in their prenatal educational outreach efforts.

Information on maternal deaths in 1984 was presented to the Committee. The Committee will present them to the annual meeting of the Virginia Obstetrical and Gynecological Society.

Lucien W. Roberts, MD,  
Chairman

## Malpractice Study

Acting on behalf of The Medical Society of Virginia, the nine physicians of the Ad Hoc Committee to Study Malpractice has continued to meet in conjunction with the legislative subcommittee appointed to study Virginia's medical malprac-

tice laws. We have gathered data and orchestrated expert testimony in order to sensitize the subcommittee to the complexity of Virginia's situation. Emphasis this year has been focused on the standard of care, use of expert witnesses, the statute of limitation and the malpractice review panels. Further exploration will be aimed at plaintiff attorney's contingency fee arrangements and the possibility of an alternative approach to settling malpractice actions.

The deterioration of Virginia's malpractice climate is best illustrated by the continued rise in annual premiums (driven by increased frequency and severity of claims) and by limited availability of coverage for some specialists. Licensed malpractice carriers in Virginia are now poised to review more thoroughly claims histories of prospective insureds before issuing or renewing coverage.

Your Committee is working on the development of a pool of expert witnesses to review medical malpractice claims. This effort is deemed imperative in order to preserve the Virginia standard of care now prescribed by law. Earlier this year we authored a bill (now a law) requiring licensed medical malpractice carriers in Virginia to submit an annual disclosure report containing closed claim file data.

Your Committee is cautiously optimistic that the final report of the legislative subcommittee studying Virginia's medical malpractice laws will not recommend any dramatic changes or liberalization of Virginia medical malpractice laws that could jeopardize an already sensitive situation in the state.

**Ronald K. Davis, MD,**  
Chairman

## **Medicine/Business Coalition**

### **Recommendation**

**That The Medical Society of Virginia monitor the various activities of HMOs, PPOs, and IPSs within the state.**

One of the primary interests of the Medicine/Business Coalition Committee has been the understanding of alternative health care delivery systems. The recommendation includes The Medical Society of Virginia devoting necessary staff time to learn about and become familiar with the increasing number of HMO and PPO activities in the state. Monitoring these activities would allow the medical community to stay current with new alternative delivery systems and become more familiar with the delivery and contract mechanisms of each entity.

### **General**

During the spring meeting, your Committee reviewed the status of medicine/business coalition activities in Northern Virginia, the Peninsula, Tidewater, South Boston and Richmond. In Northern Virginia, a group of business executives has dominated the coalition activities and has allowed for the participation of physicians. Local physicians have embarked on the creation of a physician-owned HMO.

On the Peninsula, there is an active coalition of the business and medical leadership. A group of physicians in the Newport News area have formed an IPA and are looking further at the feasibility of developing an HMO or a PPO.

The Tidewater Health Coalition in Norfolk is focusing attention on the collection of health care cost data. It has lobbied extensively with respect to increasing state support for indigent care. They are further concerned with the impact

of increasing medical malpractice costs on the delivery of health care in that vicinity. There have been a number of alternative delivery systems in the south Hampton Roads area.

In Richmond, two coalitions exist and have had increased activity. Data collection pertaining to cost and inpatient days for hospitalization continues to be one of their objectives. There are six or seven alternative health care delivery plans in the Richmond area, and a group of physicians has organized an IPA under the name of Southern Health. There has been a shift in ownership of one of the HMOs in the Richmond area, and it is contemplated that other takeovers will occur.

Your committee is pleased with the number of physicians throughout the state who have become involved or initiated local health care coalition activities. Physicians in other areas of the commonwealth are encouraged to develop a closer liaison with local business leaders. The concept of going to business and helping to solve their health care problems creates a very favorable public image and will help promote a closer liaison with those businesses underwriting a majority of health care cost.

**Russell D. Evett, MD,**  
Chairman

## **Membership**

### **Recommendation**

**That Harry C. Kuykendall, President of The Medical Society of Virginia, be nominated for honorary active membership.**

### **General**

The Membership Committee met in May and will again before the annual meeting.

Prior to the May meeting of the Committee, each member was

asked to contact five or six members of the Society who are not members of the American Medical Association. The purpose was to poll the reaction of these physicians to The Medical Society of Virginia's proposed membership unification with the AMA. (If passed by the House of Delegates, membership in the AMA would be required for continued membership in The Medical Society of Virginia). The consensus from those spoken to was that unified membership with the AMA was a good idea and should become part of the Society's bylaws.

The Committee discussed a strategy and timetable to begin on June 1 and culminate with the meeting of the House of Delegates in November. Highlights included a kickoff campaign with a letter or meeting to officers, councilors, vice councilors, and AMA delegates and alternates. This group would serve as the team to make contact with local medical societies, hospital medical staffs, and MSV delegates prior to the annual meeting. Also contacted would be specialty societies, student and resident groups.

Your Committee reviewed credit card proposals from three statewide banks to be offered to Society members. Central Fidelity Bank of Richmond was chosen as the sponsor bank and will be making an exclusive credit card offering to the membership in the fall. The Medical Society of Virginia emblem will appear on the back of each card issued. An attractive reimbursement schedule along with a waiver of the first-year card fee make this an attractive membership benefit. Proceeds from the credit card program (based on a percentage of the charges made by card holders) will be returned to the Society and earmarked for the Medical Student Loan Program. It is anticipated in excess of \$10,000 a year will be



At a joint meeting of The Medical Society of Virginia's Ad Hoc Committee to Study Medical Malpractice and the Insurance and Consumer Protection Subcommittee of the Virginia Trial Lawyers Association: in front, Dr. Ronald K. Davis (left) and Richard R. Nageotte, chairmen of the two groups; next row, Dr. Alvin E. Conner, Dr. H. George White, and Dr. Claude P. Sherman; behind them, Dr. L. Daniel Crooks, Dr. James L. Ghaphery, Dr. Robert L. Adeson, and Walter H. Emroch; at rear, Dr. Emerson D. Farley and John J. Herbig.

derived from this new program.

I would like to express my personal thanks to each member of the Committee for their individual efforts and support of all our activities this year.

**J. Thomas Hulvey, MD,**  
Chairman

## Mental Health

### Recommendations

**1. Because of the rapid proliferation of health insurance plans of varying types, the Committee feels it is important to state what it considers to be minimum mental health coverage in an insurance plan to be purchased by the citizens of Virginia and asks The Medical Society of Virginia to endorse these minimums.**

Inpatient coverage for nervous and mental disorders (including substance abuse) of a minimum 60 days per year for the acutely ill adult patient and a minimum 90 days per year for dependent individuals under age 23. For those requiring treatment not covered by the above, catastrophic coverage on a parity with that for physical illness, with case review at the 60- or 90-day level. Establishment of a review organization, such as the review organization of the Psychiatric Society of Virginia or the MSVRO. Outpatient treatment for nervous and mental disorders to be covered in a minimum insurance contract with 100% of charges for the first ten visits in order to provide acute crisis care without barrier and 80% of charges for the next 40-100 outpatient visits should they be necessary, allowing for a year of once- or twice-weekly appointments.

**2. That The Medical Society of Virginia continue to support through its own insurance plans available to the membership adequate mental health benefits and to**

**educate Virginia's elected officials, the General Assembly, and the Insurance Commission to the necessity of having available to Virginians mental health insurance meeting at least the minimum standards recommended above, either by voluntary action on the part of the insurance companies or by legislative mandate.**

The Committee remains very concerned about the effect of "adverse selection" when some insurance companies are allowed to write less adequate benefits than others. This represents a risk to some provider groups in hospital settings, such as medical schools, which may be perceived as public facilities although faculty members may be paid mostly by private practice.

While we understand the philosophic objects to insurance benefits mandated by law, the Commit-

tee now favors legislating benefits for nervous and mental disorders because of inadequate coverage compared to medicine and surgery.

### General

Issues involving treatment of acute and chronic mental illness continue to dominate concerns of this Committee, especially access availability, appropriateness, and financial accessibility to both public and private health care delivery systems. Because mental illness is widespread, provisions of mental health services by physicians and hospitals is regarded by this Committee as a primary practice of medicine and should be so defined where regulation and legislation are concerned. This position is adopted to remove barriers to timely, effective and economic provision of psychiatric and other services to avoid unnecessary morbidity from

**At a meeting of the Mental Health Committee: seated, Dr. James A. Shield, Jr., chairman; standing, from left, Dr. Asad M. Masri, Dr. Emory F. Hodges, Jr., and Dr. Joel J. Silverman.**



delayed or denied treatment. This Committee urges The Medical Society of Virginia through its delegates to express this view to the American Medical Association.

The Mental Health Committee objects to the definition of mental illness as "any disorder that can be favorably improved" as found in some publications used by some insurance carriers of the State of Virginia. Such definition could, in the Committee's opinion, be misinterpreted to deny services to the chronically ill, whose illness must be controlled if not improved.

The Committee notes that defendants in criminal matters, where questions of mental competence and sanity are concerned, are now entitled to an independent opinion, which the court may order through a public agency. The Committee suggests that the President of The Medical Society of Virginia make known to the appropriate official(s) the willingness of the Mental Health Committee to assist in the development of consultants for such purposes.

Psychiatric patients committed involuntarily to either public or private hospitals should, in the opinion of this Committee, continue to receive appropriate and timely psychiatric evaluations during the process of civil commitment or treatment, this responsibility to be met by both private and public health practitioners.

The Committee recognizes that a study is being undertaken to determine funding for an administrative authority for indigent in- and out-patients in need of medical treatment in Virginia. The Committee is concerned that the needs of the chronically mentally ill patient be met and that there be some recognition that many of these patients need a highly structured and controlled environment after acute hospitalization. It is hoped that adequate studies of homeless people

will be carried out and that estimates of a high incidence of mental illness in these individuals be subjected to research.

The Committee wishes to compliment the Medical College of Virginia's Department of Psychiatry and the University of Virginia's Department of Psychiatry and Behavioral Medicine for their continuing liaison with public mental hospitals. The Committee supports an increase in tenure positions in both schools to establish tenure tracks for psychiatrists based in public mental health hospitals.

The Mental Health Committee welcomes the expressions of concern from the membership with regard to the mentally ill.

**James A. Shield, Jr., MD,**  
Chairman

## Pharmacy

The Pharmacy Committee makes no recommendation to the House at this time.

The Committee continued to work with the Governor's Committee on Prescription Drug Abuse in the State of Virginia. Under the direction of Barry Rhodes, associated with the American Medical Association, the Prescription Abuse Data Synthesis Project (PADS) generated a report on the problem of prescription drug diversion in the commonwealth. Based on this technical study, a report is being prepared for presentation to the Governor by this multi-discipline committee. Upon its completion, a further report to The Medical Society of Virginia will be made.

The Committee continued its efforts to promote the use of the AMA patient medication instruction program (PMI) through communication with the representatives of the pharmacy industry.

**John Boniface, Jr., MD,**  
Chairman

## Physicians' Health and Effectiveness

### Recommendations

**1. That the annual budget for 1986 be \$15,000.** Although the 1985 budget for the Committee was not spent, this is a slight increase over last year. With increasing number of reports it is anticipated that expenses of the committee will be higher, especially in view of Recommendation Three below.

**2. That the bylaws be changed to allow the president, upon recommendation of the Committee chairman, to appoint additional members to the Committee at any time during the year.**

The present committee structure is one member from each congressional district and certain specified ex-officio members. It is recommended that this be retained. However, the Committee has found that at times it is necessary to call upon members of the Society who have expertise in the field of impairment for their advice and special duties. It is felt that full membership on the Committee by these experts is desirable.

**3. That the chairman be reimbursed for actual out-of-pocket expenses while transacting Committee business.**

It is recognized that committee chairmen are not usually given any remuneration and that they give their time freely as their contribution to the Society and to quality health care. However, the work of the Committee is placing increasing demands upon the time and resources of the chairman. Even with the highly qualified full-time staff assistant it is projected that next year's chairman will travel more than 5,000 miles, accumulate substantial long distance telephone bills, and spend 20-30 days away from his practice on committee work. The present chairman believes that we are not far away



THE MEDICAL SOCIETY OF VIRGINIA'S HEADQUARTERS BUILDING IN RICHMOND. *Photo*



oph by Steve Weisensale for Lee, King, Poole & White, Architects. Reprinted by permission.

from a paid medical director, but until that is accomplished the chairman should not be financially penalized.

**4. That the Committee endorse the concept of the Physicians Health and Effectiveness Committee assisting in chemical abuse programs in other health professional fields.**

We have been asked several times to accept other health organizations into our program and thus far declined on the basis that we thought our program should prove its worth before expanding our services. We are, however, from time to time been critized by members of the State Board of Medicine, other than physicians, because we have not been willing to accept clinical psychologists, osteopaths, physical therapists, etc., who are also under the jurisdiction of the Board. The Committee believes that we should not attempt to investigate and intervene in such areas, but that we should invite representatives of such groups to our workshops and offer our advice in reference to investigation and intervention, and help with placement in institutions. We believe that the actual work and financial arrangements should be carried out by practitioners in the fields involved.

**5. That referrals of medical students and house officers be accepted by the Committee regardless of whether or not they hold a Virginia license to practice medicine, and that we offer ourselves as agents for the medical schools and teaching hospitals in managing impairment problems in those institutions.**

In July of this year the committee met with the deans of all three of the medical schools and representatives of the student body and house officers in teaching hospitals. We are convinced that there are problems that need addressing, although the actual scope of the problem in terms of numbers is not

really known. There are some built-in obstacles to the administration of these institutions uncovering and rehabilitating such problems. The Committee feels that working in concert with the administrations of these institutions and with the stimulation of students and house officers to form committees of their own, that we can help. We also believe that medical schools are now recognizing the necessity of developing a part of the curriculum which includes a program on coping with stress and



**Dr. William H. Barney, Chairman,  
Physicians Health/Effectiveness**

how to solve some of the stress-related factors that plague students and house staff.

**6. That legal counsel be requested to introduce legislation which would change the Medical Practice Act so as to differentiate between physicians who divert drugs for their own use and those who divert them for others.**

The present statute does not make a distinction between these two groups and so a physician who writes a prescription for himself to satisfy his own disease is considered no differently than one who

may be diverting drugs for street use.

### **General**

There were several notable events in 1985. First, the number of cases reported has increased. In 1984, after an initial flurry, reports all but dried up. There are several factors responsible for this, but probably the most important is the emergence of the type of reports which we now receive. In the beginning we were handed the visible cases, that is, the so-called "tip of the iceberg." Reports are now being received of younger physicians with much earlier problems, and some are being reported by families and friends. This is really the area in which we think that we can do the most good and that is gratifying. Somewhat disturbing however, although not unexpected, is the rising number of drug cases (as opposed to alcohol) now being reported.

Second is our improved relationship with the Board of Medicine. The problems of the first several years can be attributed to the "growing pains" of a new program and the need to develop trust, understanding, and the ability to communicate among ourselves. Thanks to the diligence of the committee, the Board of Medicine, the Attorney General's Office, and our legal staff, we now have accomplished that. We can now assure impaired physicians that if they follow recommendations for a rehabilitation program, in most cases we can preserve anonymity and protect their licenses. It should be noted that this year five cases have been referred to us by the State Board.

Finally, of major importance is the acquisition of Mrs. Lorraine McGehee as full-time staff assistant. She has taken charge of many aspects of the program and the success of this year is due in large part to her ability and diligence.

The one major regret of the committee is our inability to educate *all* of our members as to the nature of chemical addiction. In three instances this year physicians have successfully completed a rehabilitation program, then had difficulty getting back into practice because of resistance, either from fellow physicians or from hospital boards. The answer to this is not clear and is not going to be easy, but if we are to be totally successful we must find a way.

A personal note: I have requested that I not be reappointed to the committee next year and the President Elect has indicated that he will honor my wishes. After six years on the Committee, four as chairman, it is "time for a change." Much has been accomplished and much remains to be done, but the program is now on a firm foundation on which new ideas and new enthusiasm can be built.

There are many people who have contributed to the development of this program and I wish I could express my thanks to each one. Especially I appreciate the work of the members of the Committee, the staff, our legal counsel, the Board of Medicine, and the Attorney General's Office. Above all, however, I want to thank the membership of The Medical Society of Virginia. During these past four years it has been a rarity for anyone to decline an assignment, and that has made my job less difficult than it could have been. Many thanks.

**William H. Barney, MD,**  
Chairman

## Public Relations

### Recommendations

**1. That plans be formulated to hire another staff person at headquarters with primary responsibility for Medical Society of Virginia public relations coordination, with the**

**help of and under the guidance of the Public Relations Committee.**

**2. That Mr. James Moore be requested to study the feasibility of this plan and report as soon as possible with the financial commitment this will entail.**

This year the Public Relations Committee was called upon by Council to attempt to establish a program at the state level, which could aid local societies with their outreach in their communities. Toward this end we called upon our consultants for direction. A comprehensive packet of various programs was submitted to the Committee with a cost analysis. The upshot of this was a decision by the Committee to canvas local societies as to their needs.

Forty-four surveys were sent out. Sixteen societies responded. The selections of needs expressed were for 1) educational pamphlets on specific issues and 2) training sessions and periodic topical speeches by informed persons.

The Committee was subsequently briefed on the survey, the Richmond Academy PR effort, the Ohio State PR blitz, and the Lynchburg Academy effort to respond to a closed panel HMO in their community. In the interim a comprehensive speaker's bureau packet has been mailed out to all component societies.

The Committee looks forward to this challenge and requests the support of the membership to aid in getting our message to our various localities.

Again this year the Public Relations Committee is happy to welcome the media to the Homestead. This has been an increasingly effective outreach of The Medical Society of Virginia through this Committee and we look forward to increasing the media exposure in years to come.

**Frederick K. McCune, MD,**  
Chairman

## Rehabilitation

During the past year, the Rehabilitation Committee, individually and collectively, has continued its primary role of providing advice and recommendations to the Virginia Department of Rehabilitative Services in regard to policies, procedures and appropriate fees for medical services provided the clients of the Department.

The Committee met on June 2, 1985 with eleven members in attendance. Also present were nine members of the staff of the Department of Rehabilitative Services. The committee heard reports on current status of funding in general and innovative programs for individuals with disabilities. There was a special presentation regarding the Traumatic Brain Injury Program at Woodrow Wilson Rehabilitation Center. Plans were presented to provide more information to physicians regarding the role of the Department of Rehabilitative Services and the services this agency can provide to disabled individuals. In addition, plans were presented to enhance the utilization and involvement of district medical consultants in the rehabilitation process at the local level. A report on the strategies developed by the Department to achieve more cost containment for medical services was presented, as well as the results of the "Medical Only Service" Program that was undertaken during the past year. The Committee heard a report on the highlights of the 1984 Social Security Reform Act and the impact this legislation would have on the medical community. It approved a revised radiological fee schedule and offered suggestions regarding the revision of other fee schedules. It reconsidered several specific new therapeutic procedures and made recommendations to the Department concerning them.



**At a meeting of the Rural Health Committee: from left, Dr. Emerson D. Baugh, Jr., Dr. James L. Patterson, Jr., chairman, and Dr. Gene E. Clapsaddle.**

The Committee, through its advice and recommendations, individually and as a group, continues to assist the Department in providing meaningful services to the disabled citizens of Virginia.

The Committee has no recommendations for the House of Delegates.

**Alexander McCausland, MD,**  
Chairman

## **Rural Health**

### **Recommendation**

**That the Rural Health Committee of the Medical Society of Virginia continue to study the Kentucky Physician Care Program with possible application to providing free health care to eligible patients in Virginia, and to study alternate programs, now available in some localities, e.g., free clinics, which may provide better continuity of medical care as records are maintained in a central location, familiar to these patients.**

As presented by this Committee to Council earlier this year, the Kentucky program is now in effect

and has been successful. The Kentucky Medical Society has been kind enough to continue sending progress reports, which include their problems, for our information. When available, this material will be summarized and again presented to Council. The concept of free clinics throughout the state is also being studied, as well as those successfully run by local authorities and medical staff.

In addition to the above, The Medical Society of Virginia was again represented by the Chairman of the Committee at the annual 4-H Conferences at Virginia Tech in Blacksburg. It was a very satisfying experience to observe our youth in their very effective and enthusiastic planning and working to improve our state's 4-H activities. By supporting this program financially and by sending a Society member to present the Health Award, a very impressive ceremony, the medical profession's continued interest in the youth of our state is confirmed.

**James L. Patterson, Jr., MD,**  
Chairman

## **Student Loan**

### **Recommendation**

**That The Medical Society of Virginia establish, finance and administer a medical student loan program.**

The Scholarship Committee has worked diligently since 1984 on the design of a medical student loan program to be administered by The Medical Society of Virginia. The goal of the program is to provide loan funds with reasonable interest rates for students who are residents of Virginia attending Virginia medical schools.

Objectives of the program include: 1) create of a revolving loan fund by assessment of each medical society member each year; 2) provide a lower rate loan for needy medical students who have completed their first year of enrollment in a Virginia medical school; 3) create a private non-profit corporation foundation to oversee the administration of the funds, including the distribution and collection of the loan monies; 4) demonstrate evidence of the support of organized medicine to future students of the medical profession; 5) encourage membership of medical students in The Medical Society of Virginia.

### **General**

Extensive fact finding and details have been devoted to this student loan proposal. Members of the Committee, staff and legal counsel of M<sub>SV</sub> have gathered information from a variety of sources, including background material from the Missouri Medical Association's Loan Program. Administration and finance, staffing, the application process, eligibility and general conditions of the program have all been thoroughly documented. Specifics of the proposal include 1) a maximum loan for any one school year would be \$2,000; 2) loans would be made for any worthy pur-

pose directly involved with the furtherance of the student's medical education; 3) close cooperation and annual reporting would occur between MSV Foundation Board and the dean's office at each medical school; 4) loan funds would be returned with interest to the foundation, allowing for future loans and perpetuity of the overall program(s).

The Scholarship Committee made a formal proposal to Council in January with followup and a more detailed proposal to Council in May. The concept of the student loan program was heartily endorsed by Council, and pertinent questions and concerns have been addressed by the Committee. Necessary legal and IRS designations for the foundation have been accomplished, and it is hoped that the wisdom of the House of Delegates will see fit to begin funding such a program in 1986.

**Anthony J. Munoz, MD,**  
Chairman

## Sports Medicine

### Recommendation

**That appropriate committees of The Medical Society of Virginia organize and implement educational programs which allow our membership the capacity to fully implement "quality" fitness and treatment programs associated with fitness and sports-related activities and injury.**

The committee makes this recommendation because the public has perceived a lack of support from large segments of the orthodox medical community concerning the fitness movement. As a result, major segments of the population seek fitness advice and treatment of injury from totally unqualified or partially qualified groups. The physician, by his educational background and his understanding

of the patient as a whole, is the natural, and should be the primary, controlling source of the patient's fitness, sports and occupation-related activities, but in certain circumstances he or she may need supplemental information in this newly developing area to be fully effective.

### General

The Sports Medicine Committee has had continued and increasing activity in the following areas: review with the Physical Therapy Association concerning the legitimate role of physical therapists in patient care; similar review and discussion with the Virginia Athletic Trainers' Association; continuance of the Annual Sports Medicine Program with the Virginia High School Coaches Association. This year's successful program for the coaches was conducted with the cooperative effort of the Lynchburg Academy of Medicine under the chairmanship of Dr. Jay E. Hopkins.

**Robert P. Nirschl, MD**  
Chairman

## State Bar Liaison

For well over a year, members of The Medical Society of Virginia and the Virginia State Bar have been working to revise and update the "Principles of Cooperation for Physicians and Attorneys in the Commonwealth of Virginia." At the February meeting consensus was reached on the final draft for the second edition of this publication. Copies will be available at MSV headquarters later this year.

Robert Baldwin, executive secretary of the Supreme Court of Virginia, provided the committee with an update on the medical malpractice review panels. From July 1, 1975, to December 31, 1984, a total of 966 panels have been requested. Of the panel opinions ren-

dered, over 78% found that the evidence does not support a conclusion that the health care provider failed to comply with the appropriate standard of care. The frequency in which medical malpractice review panels are being requested seems to be on the increase, with Northern Virginia and the Tidewater area being the geographic locations hearing the largest proportion of cases.

Dr. Ron Davis, chairman of The Medical Society's Medical Malpractice Study Committee, made an excellent presentation at the February meeting. Reviewed were the issues that the legislative subcommittee studying Virginia's medical malpractice laws are studying, such as the limitation on awards, the standard of care, statute of limitation, medical malpractice review panels, use of the expert witness, as well as the adequacy of Virginia's medical malpractice rates are all being detailed. This ambitious undertaking by the legislative subcommittee has proved to be informative and enlightening. Members of the legislative subcommittee (five attorneys and two health care providers) have taken the time to review Virginia's laws and listen to testimony from various perspectives. This study has resulted in a greater appreciation not only for the complexity but for the gravity of the problem. The legislative subcommittee submitted an interim report to the General Assembly in early 1985, with a final report forthcoming when the General Assembly convenes in 1986. The interim report did not include any recommendations for substantive changes in Virginia's current laws. However, an insurance disclosure bill was passed in the 1985 session of the General Assembly requiring an annual report of the licensed medical malpractice carriers in Virginia concerning closed claim files.

The Liason Committee was most complimentary of Dr. Davis and his committee's efforts. It was felt that the contribution of individuals such as Dr. Davis had enabled the legislative subcommittee to make a thorough investigation of Virginia's medical malpractice laws.

**Claude P. Sherman, MD,**  
Chairman

## **VaMPAC**

The Virginia Medical Political Action Committee continues to improve its membership over 1984 as it nears its 22nd year as the political arm of The Medical Society of Virginia. Auxiliary membership and "PAC 250" memberships are at an all-time high in 1985.

VaMPAC provides many services to good government. In addition to direct financial assistance and encouragement, the PAC provided valuable political expertise as well as special assistance to warranted campaigns where the medical community's personal involvement could make the difference between winning and losing. Our grass roots organization of physicians and their families continue to give medicine high visibility in the political arena.

1985 was the third in the series of

a three-year joint fund-raising activity by AMPAC/VaMPAC in an effort to involve more of the medical community in the political process and candidate support.

In January, VaMPAC held its third much-acclaimed reception at the Commonwealth Club the evening before the start of the 1985 legislative session to honor its leadership. Also in attendance were PAC 250 members and spouses, Gov. and Mrs. Charles S. Robb, and Lt. Gov. Richard J. Davis.

The executive director of VaMPAC traveled throughout the state attending many component society meetings, sharing political information and ideas, and encouraging grass roots support in the political process.

Eighty-nine percent of candidates supported by the PAC in the 1984 General Assembly election cycle were victorious. VaMPAC supported 93 candidates (47 Democrats and 46 Republicans). VaMPAC is currently working to help our friends during this most important House election. This is a record of accomplishment of which the entire medical community can be proud. Yet we should take greater pride in what these facts and statistics actually represent—thousands of doctors and their families who have voluntarily support-

ed the PAC with dollars as well as their valuable time. These are the people who recognize that the future of our health care delivery system is in large measure determined by today's legislative decisions here in Virginia and in Washington DC.

**Harold L. Williams, MD**  
Chairman

## **VIRGINIA MEDICAL**

VIRGINIA MEDICAL's annual report came to you in twelve installments, i.e., the monthly issues you received in the past year. These paragraphs salute those who made those issues possible:

- The contributors who created the original articles in medicine and history, the editorials and commentaries, the letters and memoirs, and all the other fine text the journal was privileged to print.

- The readers who sent us news—the sad reports of deaths, the happy reports of achievements, the anticipatory reports of meetings.

- The Medical Society of Virginia staff in general and the Va Med staff in particular, for professional services of superior quality.

**Edwin L. Kendig, Jr., MD,**  
Editor

**YOU'RE INVITED**  
**to The Medical Society of Virginia's**  
**138th Annual Meeting at the Homestead**  
**November 7-10, 1985**

# VIRGINIA MEDICAL EDITORIAL

## Excelsior!

**D**EGREE of success is not easily measured. However, the State Board of Medicine has taken a giant step toward improving the regulation of medicine in Virginia. Governor Robb's office has worked tirelessly with representatives of the Board to promote the following action:

1. Appointment of a physician to a full-time post as director of the Board. It is anticipated that Mrs. Eugenia Dorson, presently executive secretary, will become one of two deputy administrators.
2. Appointment through The Medical Society of Virginia of a panel of experts in the general medical specialties. Members of these panels will be available to review cases involving possible disciplinary action and will be compensated at an appropriate level.
3. Addition of four new clerical positions within the Board office. Included will be two workers with paralegal expertise and two additional clerk-typists.
4. Two specially trained investigators to be available to the Board of Medicine.

Much time and effort have been expended on this project. The Medical Society of Virginia Committee, chaired by Dr. Charles M. Caravati, Jr., has

been a major factor in the success so far achieved. (Editors' Note: A report of that Committee is to be made to the House of Delegates at the annual meeting but was not available for this issue.) The Office of the Attorney General, specifically Deputy Attorney General Matson T. Jacks, has been most cooperative; although the desired addition of two assistant attorneys general to be assigned directly to the Board of Medicine has not yet been approved, such a move may yet be forthcoming.

Now for the caveat. Under the present law the State Board of Medicine remains a part of the Department of Health Regulatory Boards. The Department's director appears to be in agreement with much of the proposed change. However, he has clearly stated that he has the final word as regards all appointments. If the director should appoint a director of the State Board of Medicine, without consultation with or against the advice of the State Board of Medicine, the situation may even become worse than that which presently exists. Is the Department of Health Regulatory Boards really necessary?

EDWIN L. KENDIG, JR., MD

# VIRGINIA MEDICAL OBITUARY

## **Frasier Williams, MD**

Dr. Thomas Frasier Williams, McLean, died August 2 at Fairfax Hospital at the age of 78. He had Parkinson's disease and in 1980 had retired from his ENT practice in Arlington.

Born in Robinson Springs, Alabama, Dr. Williams graduated from the University of Alabama and the medical school at Tulane University, then trained at the old Eye, Ear, Nose and Throat Hospital in Washington DC. He served in the Army Medical Corps in Europe during World War II.

Dr. Williams had been director of the Washington Hospital Center hearing clinic and an associate professor at the Georgetown University School of Medicine. He was a past president of the Northern Virginia Academy of Surgery and a long-time member of the Arlington Medical Society, The Medical Society of Virginia, and the American Medical Association.

## **Donald Blose, MD**

Dr. Donald Curtis Blose, Galax surgeon died August 7 at the age of 52. He was a graduate of the Medical College of Virginia, where he also took his training in surgery. He came to membership in The Medical Society of Virginia through the Southwestern Virginia Medical Society.

## **Memoir of E. J. Palmer 1910-1985**

*By John A. Martin, MD,  
Conrad Stone, MD, and Homer Bartley, MD*

After practicing psychiatry and neurology in Roanoke for 30 years, Dr. Edwin J. Palmer retired and moved to Kitty Hawk, North Carolina, in 1976. He lived there with his wife, Ruth, until his death on March 8, 1985.

Born in Louisiana, Dr. Palmer started his medical career in 1930, graduating from the Medical College of Virginia School of Pharmacy. The same year he entered the Medical College of Virginia, graduating in 1934.

He began his formal training in mental disease in Massachusetts, becoming senior physician and pathologist at the Monson State Hospital in 1941. After spending a year in neurology at the Mayo Foundation, he began his military career. He served for five years as assistant chief of neurology and psychiatry at Brook General Hospital in Texas and as chief of psychiatry at the Woodrow Wilson General Hospital in Staunton, Virginia. In 1946 he began his private practice in Roanoke. His practice blossomed early into a very busy hospital and office practice, with a wide referral pattern from in and out of the state. He served on the staffs of all of the Valley hospitals. From 1969 to 1972 he served as chief of the professional staff at Roanoke Memorial Hospitals: his three-year term was the first departure from previous one-year terms. If anything speaks to his unflappable, serene, concerned and dedicated approach to difficult patients and professional problems, this unusual term of office, which was highly approved by his peers and the administration, is a very good example.

In his professionalism he was a stalwart supporter of organized medicine, being a life member of the American Medical Association, a life fellow of the American Psychiatric Association, and a life member of the American College of Physicians, among many others. For eight years he served as an examiner for the American Board of Psychiatry and Neurology. During the exciting evolution of psychiatric care, he was always in the forefront of his discipline and early on used the new modes of treatment as the drug, electric, and surgical applications evolved.

His respite from the pressure of his busy practice usually involved his homes and gardens, which in themselves reflected his personality in things practical and beautiful. An original "do-it-yourselfer," he delighted in the gadgetry of repair, maintenance and the annual ritual of gardening. He was particularly adept at restoration of fine antique furniture.

Although his death brings sadness to all of us who knew him, there is a certain comfort in recounting the events of an outstanding medical career and a delightful decade of happy retirement with his wife in the pleasant surroundings of the Outer Banks. Ed is survived by his wife and one sister.

## Memoir of L. R. O'Brian, Jr. 1912-1984

*By Frank N. Buck, MD,  
and W. H. Morris, Jr., MD*

Dr. Leland Ray O'Brian, Jr., respected surgeon of Lynchburg, died of myocardial infarction December 19, 1984, at age 72.

The son of a Baptist minister, Dr. O'Brian was born in Durham, North Carolina, October 24, 1912. His undergraduate education was at Mars Hill Junior College and Wake Forest University, where he early demonstrated a keen and retentive mind and graduated at an early age. His medical degree was from the University of Pennsylvania, Class of 1936. He continued in postgraduate surgical training at Union Memorial Hospital, Baltimore, and the Women's Hospital of Maryland. He met Gilberta McGinley in 1936 and they married in 1939.

Dr. O'Brian initially entered the practice of surgery in 1940 at Statesville, North Carolina. In 1941, he established his practice in Lynchburg. He was certified by the American Board of Surgery in 1944. His practice was interrupted by service in the United States Navy 1944-1946, where his duties were in the Mediterranean Theater. He practiced surgery in Lynchburg from 1946 until his retirement in 1983 with great skill and compassion. He earned the profound respect of his colleagues and the love and confidence of his patients.

Dr. O'Brian was a man of great talent and many skills. His endeavors outside the practice of surgery were numerous. He was an entertaining musician, a modest artist, proficient aviator, and ardent golfer, and above all, a loving husband and father.

He served the medical community in many staff positions, always with skill and diplomacy. He was a member of the board of directors of Lynchburg General Hospital until his retirement in 1983. He was also a past president of the Lynchburg Academy of Medicine. His professional memberships included the Lynchburg Academy of Medicine, The Medical Society of Virginia, the Virginia Surgical Society, the AMA, and the Southeastern Surgical Society, and he was a fellow of the American College of Surgeons. He was active in the civic affairs of Lynchburg and over the years a member of many civic organizations.

He is survived by his adored wife of 45 years; two sons, Leland Ray III and Robert Murray; two daughters, Patricia Ann Devine and Brooke Wedman Schooler; and nine grandchildren.

## Memoir of G. S. Fitz-Hugh 1907-1984

*By W. Copley McLean, MD,  
John L. Guerrant, MD,  
and White McK. Wallenborn, MD*

The Albermarle County Medical Society was saddened by the death of one of its outstanding members, Glassell Slaughter Fitz-Hugh, on October 2, 1984.

Dr. Fitz-Hugh was born in Charlottesville, attended local schools and graduated from Augusta Military Academy, Ft. Defiance, Virginia. He received his medical degree from the University of Virginia in 1933. After that he served two years on the housestaff at Charity Hospital in New Orleans and two years as a resident at the University of Virginia Hospital. In 1937 he joined the faculty of the University of Virginia School of Medicine and at the same time began an association with Drs. Halstead Hedges and Fletcher Woodward in private practice. Service in the Army Medical Corps from 1942-1946 temporarily interrupted his practice and teaching career. He was appointed chairman of the Department of Otolaryngology and Maxillofacial Surgery at the University of Virginia in 1951. When he retired in 1977 after 40 years of service, the board of visitors of the University of Virginia elected him professor emeritus. He continued to see patients and was very active in the UVa Medical Center until shortly before his death.

Dr. Fitz-Hugh was an active supporter of University of Virginia alumni activities and at one time was president of the Virginia Student Aid Foundation.

Dr. Fitz-Hugh is best remembered by a host of students, residents, medical associates and former patients as a concerned physician and dedicated teacher. In dealings with sick people he demonstrated to both the patient and his students that he cared for and was concerned with whatever problems the patient might have, not just his infection or his injury. In recognition of these skills he was awarded the Robley Dunglison Award for excellence in teaching in 1967. Also, to honor his many contributions in the field of medicine his former residents, friends and patients established the Fitz-Hugh Chair of Otolaryngology at the University of Virginia School of Medicine.

Dr. Fitz-Hugh is survived by his wife, three children, six grandchildren and a sister.

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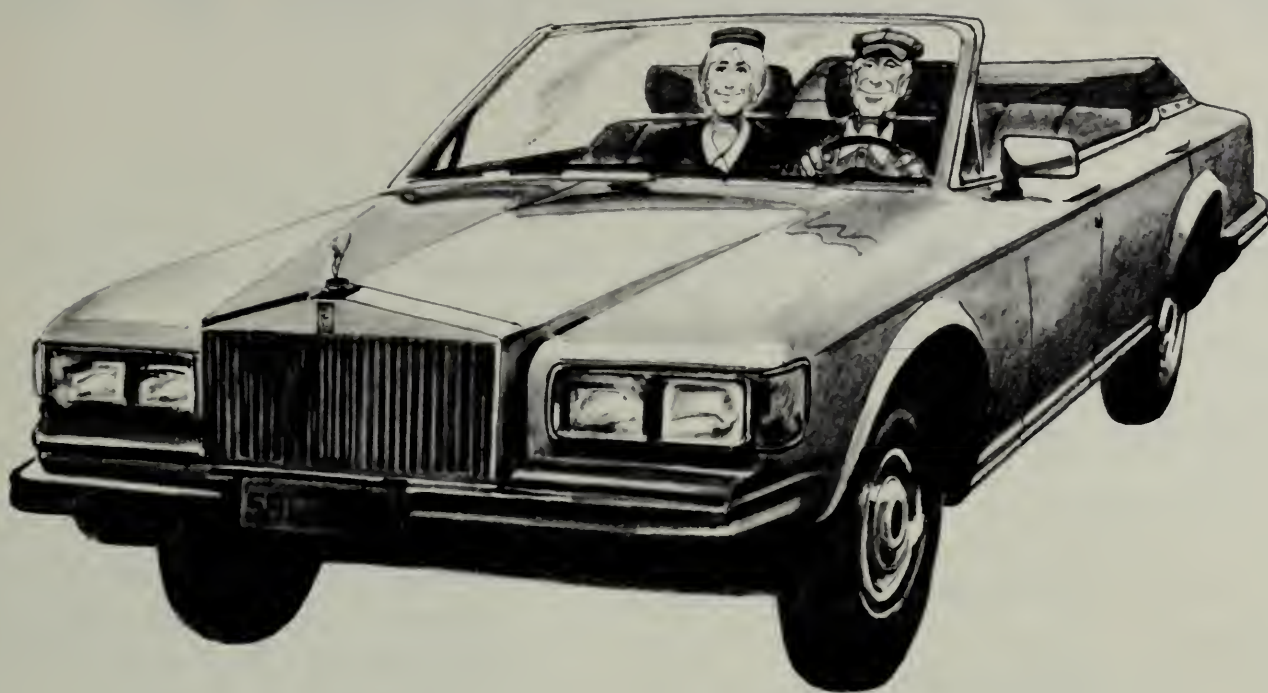
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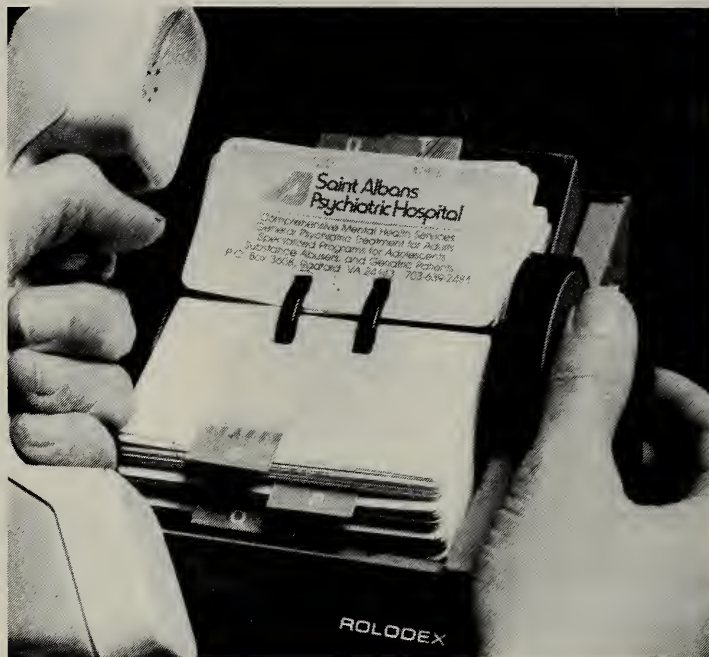
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# LETTERS

## Prefers voluntary basis for AMA membership

I am opposed to the AMA/MSV unification plan proposed by the AMA and some members of The Medical Society of Virginia.

To be most effective, the AMA must represent volunteered time, talent and material resources of physicians who elect to be part of the effort.

I strongly believe that a professional organization, or for that matter any organization--union, political, or governmental, is weakened when membership is forced. Coerced participation breeds disaffection.

The current AMA/MSV unification plan is a sign of frustrated AMA leadership. If The Medical Society of Virginia votes to "unify", I strongly believe that it will weaken the Society and will tarnish the still tarnishable image of the AMA.

We, the members of The Medical Society of Virginia and the AMA, need insight to accept things we cannot change and resolve to increase the membership of the AMA and The Medical Society of Virginia on a voluntary basis.

H. George White, Jr., MD

PO Box 2217  
Winchester VA 22601

## Yesterday's medicine is today's marketing

Recently in this journal Mitchell traced the use of herbal medicines from antiquity until the antibiotic era.<sup>1</sup> He finished with a plea for the preservation of our herbal flora despite modern industrial societies' incursions on the natural habitats of herbs. Included in the article were fine nineteenth century illustrations of some of the Confederate Army pharmacopeia. These plants may have appeared strange to present-day Virginia physicians; however, some of their patients today ingest many herbal products in the latest popular diet program, called "Herbalife."

In the past three years the Herbalife program has swept eastward from California to Virginia Beach, marketed by enthusiastic devotees who tried it and then sold it to others. When one of my patients

bought the dietary materials in order to lose weight postpartum, she brought her purchase to my office so that I might advise her whether they were safe for a nursing mother's use. The contents of her tote bag included a four-liter jug of clear liquid, one can of powder, and numerous bottles of pills. An afternoon spent with Dorland's *Illustrated Medical Dictionary* and Webster's *New Collegiate Dictionary* revealed the nature of the Herbalife products. (Only chaparral and corn silk were not described in either of these sources.)

- Formula 1, a powder with skim milk added: protein, vitamins, minerals and milk sugar (lactose).

- Formula 2, two tablets three times daily: vitamin B6; lecithin, a phospholipid colloid concentrated in brain tissue and in meats and eggs; cascara sagrada and senna leaves, both laxatives; kelp, or ashes of seaweed, which contains B vitamins and minerals, especially iodine; vinegar, a weak acetic acid, probably for flavor; chickweed, the family *Alsinaeae*, whose seeds and foliage are relished by birds; licorice root, a lubricant, cough suppressant and laxative; saffron, the orange-colored, pungent, aromatic dried stigmas of *Crocus sativas*, the crocus plant, used to color and flavor foods; gotu kola, the kola nut, used to flavor and scent cola drinks; echinacea, a plant with tonic properties; black walnut, a vermifuge, or purger of worms, and, therefore, a laxative; hawthorne berry, a flavoring; fennel seed, a European herb of the carrot family cultivated for its aromatic seeds; dandelion, rich in vitamins and minerals; burdock root, which is in the aster family of plants, probably added for aroma; parsley, rich in vitamins and minerals and a flavoring; papaya fruit, rich in vitamin C and digestive enzymes; yeast, rich in B vitamins and in amino acids.

- Formula 3: tablets containing vitamins and minerals.

- Formula 4: linseed oil, a lubricant of the bowels and a source of unsaturated fatty acids for the absorption of the required daily fat-soluble vitamins.

- Formula "Cell-u-loss": vitamin C, which aids iron absorption; potassium, intended to prevent weakness from diuresis, dieting and diarrhea; iron, intended to prevent anemia from insufficient iron intake while dieting; buchu, dried leaves used as a diuretic and stomach stimulant; couch grass, a perennial grass used as a diuretic; corn silk; hydrangea and juniper berry, both diuretics; uva ursi, or bear berries, whose leaves are used as a diuretic, gastric stimulant, and laxative or vermifuge; kelp, lecithin and vinegar as in Formula 2.

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• Aloe drink: aloe and comfrey, laxatives; chamomile and citric acid, for flavor; chaparral, or California evergreen oak.

• "N.R.G.", recommended in the program as a "natural energizer": guarana, the seeds of the Brazilian plant *Paullinia cupana*, a diarrhea preventive containing the caffeine-like compound guaranine.

By the time I discovered what ingredients were in the Herbalife products several other of my patients had already used it for months before consulting me. I have listed these ingredients in case any of my colleagues should be asked for their assessment of the Herbalife program. In our generation, as in the past, herbal products continue to have an interface with modern medicines in the daily lives of our patients.

Duane A. Lawrence, MD

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1. Mitchell RE. Herbal medicine. *Va Med* 1984; 111:753-756

### Decreasing benefits cause "grave concern"

The Psychiatric Society of Virginia wishes to call to the attention of Medical Society of Virginia members its grave concern over the ever-decreasing benefits for nervous and mental disorders offered by the health care insurance industry. The Psychiatric Society recommends the following as basic and minimum benefits for these illnesses:

1. Inpatient care per calendar year
  - a. 60 days for adults; 90 days for dependents (under age 23) for acute illnesses.
  - b. catastrophic coverage for severe and chronic illnesses on a parity with any other medical or surgical illness with an independent peer review at the 60 or 90 days level.
2. Outpatient care per calendar year
  - a. the first 10 visits covered 100% to encourage early and adequate treatment.
  - b. the next 90 visits covered 80% with peer review beyond that point for psychoanalysis, long-term intensive psychotherapy, or management of chronic or catastrophic conditions.

Eloise C. Haun, MD

President, Psychiatric Society of Virginia  
336 South Main Street  
Woodstock VA 22664

# Feast or Famine

In our society, eating habits vary, and food is often used as more than a source of nourishment. So we accept many individualized patterns.

But some people go too far. The anorectic, threatened by food, slips into a pattern of self-imposed starvation. The bulimic, using food as a narcotic, binges and purges in an attempt to cope with overpowering emotions.

The problems demand expert intervention of an unusually comprehensive sort. They demand nothing short of what Sheppard Pratt now provides in its Eating Disorders Program.

Just as the ideal diet for any individual is a matter of proper balance, the ideal treatment for anorexia or bulimia must also be properly balanced and individualized. For this reason, Sheppard Pratt carefully evaluates each patient and tailors a treatment program that draws on all necessary disciplines: medicine, psychiatry and social work. And we administer this treatment intensively, continuously — from inpatient to outpatient to aftercare.

Sheppard Pratt is achieving good results with eating-disordered patients by countering the extremes of feast or famine with a steady diet of multi-disciplinary guidance and care.

For a more detailed description of the Eating Disorders Program at Sheppard Pratt, please contact: Dr. David Waltos, Admissions Officer, Sheppard and Enoch Pratt Hospital, P.O. Box 6815, Baltimore, MD 21204. (301) 823-8200.



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# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

### BIG RESPONSE TO FIRST MALPRACTICE COVERAGE SURVEY

By Alvin E. Conner, MD

Increasingly in the last few years, Medical Society of Virginia members have been calling headquarters to ask for help with malpractice coverage problems, saying their policies have been cancelled or not renewed, or that they've had to buy expensive substandard coverage or alter their modes of practice.

Concerned with these queries, the Society's Insurance Committee searched for data pertinent to malpractice coverage in Virginia. Finding none, the committee asked the Society to survey Virginia physicians on the subject. A questionnaire was worked up, and with an accompanying letter of explanation, it went into the mail in August to all of the 10,400 physicians with Virginia licenses who are practicing and/or living in the state. The survey asked for answers to these questions:

- Do you currently carry medical malpractice coverage?  
If not, why not?
- Have you declined or had your coverage cancelled in the last two years?
- What company declined or cancelled your coverage?
- Why was your coverage cancelled?

The response to the mailing was tremendous--4,753 responses (about 45.7%) had poured into MSV headquarters by September 15, when this analysis was prepared, and more have come in since then, a clear demonstration of how sensitized Virginia physicians have become to this subject. Those who answered represented both individuals and groups, so that in some instances the responses may have represented more than one physician. The data used in this analysis represent responses.

#### Of 36 going bare, cost most frequent reason

The respondents who reported they had no malpractice insurance in force, for whatever reason, totalled 36. Of these, 22 were solo practitioners, ten represented

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corporations, groups or government, and four did not state their position. These were the causes they gave for their lack of coverage:

Costs	15	Retired	4
Claims experience	9	Age	1

Seven gave other reasons, such as "don't need it" or "never had it." Sixteen of the 36 indicated they chose not to insure themselves.

#### Claims not biggest cause of coverage roadblocks

Difficulty with coverage in the previous two years was reported by 92 respondents. Of this group, 56 said they are in solo practice, 30 represented groups, and six said they work for agencies of government. Despite the problems, all ultimately obtained coverage, they said. Here are the causes, as perceived by the respondents, for the difficulties they had:

Carrier left market	21	Age	3
Claims experience	20	Moonlighting	2
Underwriting standards	15	Unknown/not stated	30

The spectrum of causes is surprising. Less than 25% said they were declined or cancelled specifically because of claims experience--though we know that all causes are ultimately related to this.

#### Ten carriers involved in coverage rejections

What companies declined or cancelled coverage? Here are these 92 respondents' answers. It should be noted that some of the respondents were declined or cancelled by more than one company.

VIR	44	ICA	3
PHICO	31	Hall (ACOG broker)	2
St. Paul	26	INA	1
Professional Mutual	7	Hartford	1
Aetna	5	Chubb	1

That 20 of these respondents have been insured by companies peripheral to the Virginia market is surprising. Of these 20 respondents, 13 lost their coverage because the company pulled out of the market permanently (Professional Mutual, Aetna, and Chubb). Virginia's three major malpractice insurers--St. Paul Fire & Marine Insurance, the Virginia Insurance Reciprocal (VIR), and Pennsylvania Hospital Insurance Company (PHICO)--left the market for certain categories temporarily.

Another finding might have been anticipated, i.e., that although St. Paul insures almost one-half of the physicians, it was named in only 26 problem cases, while VIR and PHICO, with smaller market shares, were named in 44 and 31 cases respectively. This relates

to St. Paul's endorsement by The Medical Society of Virginia and the comparative strengths of the three companies.

Here are the specialties of the 92 respondents who reported coverage problems. Note that the data destroy the perception that only higher risk specialities have coverage problems.

Family Practice	17	Anesthesiology	3
Ob-gyn	15	Neurosurgery	2
Internal Medicine	11	Urology	2
Surgery	10	Ophthalmology	2
General Practice	6	Pediatrics	2
Emergency Medicine	5	ENT	2
Orthopedics	5	Other	9

Even a dermatologist and a psychiatrist reported problems with coverage.

To summarize the information from the 92 respondents who reported problems obtaining coverage: 1) A spectrum of causes, not only claims experience, has harassed Virginia physicians. 2) A significant number of physicians may be insured by companies with little commitment to the Virginia market. 3) St. Paul is more predictable and constant in its underwriting standards than are its two major competitors.

## New physician attitudes to litigation revealed

The threat of malpractice influences the way we practice, or so it is claimed. Though this topic was not addressed in the survey questionnaire, the responses indicate that four FPs have discontinued practicing obstetrics, one FP has stopped giving anesthesia, and one neurosurgeon no longer does myelography. Because of this threat, one respondent said he retired, another is contemplating retirement. Furthermore, three respondents said they were forced to buy \$25,000 deductible policies, a persuasive way to influence.

Another area of interest is comprised of the 224 respondents who made more than cursory comments. These comments were read carefully for concerns, level of knowledge, and suggestions. Their concerns relate almost entirely to the effect the present and anticipated malpractice environment will have on the quality of medicine; this holds true even when the comments are couched in economic terms. While there are varying levels of understanding among the respondents of this complex subject, we have grown beyond the "greedy lawyer" stage. The physicians now suggest tort reform coalitions, legislative pressures, and other political measures as ways to restore balance to the system.

And yes, they suggest we keep our house in order.

# Adolescent Drug Dependency and the Family

Larry Jenny, *Washington, DC*, and  
Richard H. Schwartz, MD, *Vienna, Virginia*

WHEN OUR SON was about 13 years old, we began to notice changes in him. We attributed these changes to the difficulties of adolescence. He dropped his friends from earlier years. The new friends who began to appear were reluctant to identify themselves on the telephone and were secretive about what they wanted and where they could be reached.

More serious problems began to surface when he reached 16. His academic performance declined, and he was disciplined at school for truancy, faking an excuse, showing disrespect to teachers. Finally he was caught with two other students drinking beer in the school parking lot at noon. That led to suspension from school, family conferences with guidance counselors, and intensive efforts at home to retrain him in normal behavior. My son wrote an

essay on the evils of teenage alcohol abuse and promised never to drink again.

But in the next year and a half similar episodes occurred and even became frequent, and we became convinced that he was using not just alcohol but other drugs. We tried the arm-around-the-shoulder approach, calm talks, discussions on the dangers of alcohol and other drugs. These would end with promises by my son not to indulge again, but within a few weeks high resolve had been replaced by recidivism.

Through all this, we found plausible explanations. He's shy. He's having difficulty adjusting to adolescence. It's his friends. It's the pressures of school. It's this. It's that. We didn't want to face the fact that my son was a druggie. He had a good home, concerned parents, he went to a good school, he couldn't be a druggie.

The incident that convinced us our son had more than growing pains occurred about 4:30 one afternoon when he was a senior in high school. He had been out and had just returned with the car. My wife was home; I wasn't. A policeman pulled into our driveway and arrested our son, explaining that he had been exposing himself to women and children in the neighborhood. This finally led us to seek professional help at the county mental health center.

The conferences were not a success. The counselors disregarded my son's use of drugs in diagnos-

Adapted from a presentation at Pediatric Grand Rounds, Children's Hospital National Medical Center, Washington DC, on October 24, 1983. Dr. Schwartz, a pediatrician in private practice, is medical director of the Washington chapter of Straight, a non-profit drug treatment program for adolescents and young adults. Mr. Jenny is project director for the Office of Technology Assessment, an agency of Congress, and is on the Drug and Alcohol Task Force of the Orthodox Church in America.

Address correspondence to Dr. Schwartz at 410 Maple Avenue West, Vienna VA 22180.

**"My son had a good home,  
concerned parents,  
went to a good school.  
He couldn't be a druggie."**

ing his problem; in their opinion, he was just having trouble growing up. "Give him a little room, ease up on him a little," they advised. "It will work out, don't put too much pressure on him because the pressure is producing the problem." We felt the course of action they recommended was unsuitable and discontinued our counseling sessions with them.

**E**PISODES of drug use by my son increased in frequency and severity. His academic performance in high school deteriorated, although it did not prevent him from graduating, and disciplinary episodes at school, encounters with the law, and other such incidents increased steadily.

We provoked one of these episodes ourselves. We found our son in possession of what the kids call a "lid," a plastic packet filled with marijuana. It was too much for one person to use and was obviously intended for sale. We had our son arrested for possession of marijuana six days before his 18th birthday. We took him to court and had an administrative hearing, at which he was told he'd done something illegal, not to do it again, and to write a 1500-word essay on the problems and dangers of drug use by adolescents. My son wrote a very persuasive essay on the evils of drug use—and continued to follow exactly the opposite philosophy.

About a month after our son's graduation from high school, my wife and I presented him with an ultimatum: There will be no drugs in our house. If

**"I said to myself,  
I hope they think  
he's a hitchhiker and  
isn't related to me."**

you do not stop using drugs absolutely and forever, you will have to leave this house.

To my everlasting regret, he chose to leave, to live with friends. I rationalized by saying that he would learn how hard it is to get meals; pay rent, get pocket money. I was sure he would come back in abject repentance like the prodigal son. Instead, there were further encounters with the law, arrests for driving under the influence of marijuana and for speeding. The rent went unpaid, illegally parked or licensed cars were towed away, he was cited for disturbing the peace—a series of episodes just short of criminal that evidenced deepening dependence on drugs.

Then suddenly, our son returned to us, saying that he had learned his lesson and wanted to go to college—with our support. We agreed to finance his new start. He entered college in September. By October he had been expelled from his dormitory for use of marijuana and drunkenness. He was given a second chance. It lasted 24 hours. He was caught a second time using marijuana in his room. He moved off campus with his girl friend, a drug addict. By Thanksgiving he was failing in all his courses, this in a young man who had combined SAT scores of over 1300.

By Christmas he was in total collapse. Finally he recognized that he truly needed help and enrolled in a drug and alcohol rehabilitation program in January of 1983. To our profound relief and joy, he is now, 15 months later, remarkably far on the road to recovery. He has learned that he is chemically dependent and what he must do to cope with his problem. Could you see him today, you would have trouble believing my recital of the past seven years of his life. His appearance, his manner, his outlook—all are radically changed.

**I**T is well known that as the disease of alcoholism progresses, it is impossible to maintain a normal home environment and family structure. So, too, with other forms of chemical dependency. The afflicted person has profound effects on the family and all those who love him. When the arm-around-the-shoulder approach and counselling were ineffective, we turned to face-to-face confrontations. Face-to-face led to nose-to-nose, and finally to "You will do this by God or else." In our family, our son's behavior degenerated into verbal abuse of his mother and me and physical abuse of furniture and walls.

As our son's disease progressed, we, too, became increasingly diseased. My wife was in acute pain, watching her child dying before her eyes and unable

to do anything about it. We knew he could be killed in an automobile accident while driving under the influence of drugs, in a fight over drugs, or in a confrontation with the police. My wife's pain was transmitted to me and intensified my need to be in control, or at least the feeling that I should be in control.

As I became more and more frustrated, my wife and I found points of irritation between us increasing. When we weren't fighting with our son, we were fighting with each other about how to cope with him. We moved away from each other, each seeking refuge in a lonely corner of pain. We had no family life. We had no way of understanding and dealing with the problem that had invaded every aspect of our lives.

That is the experience I want most to share with you: Chemical dependency is a disease that affects first one person and then inexorably spreads to the rest of the family. The disease of chemical dependency is a family disease.

Fortunately, we finally found a way to deal effectively with the crisis in our family and are on the road back to individual and family health, but a year ago I could not have spoken so frankly and calmly about our experience. I was on the verge of complete collapse, suffering from acute fear for my son's life and well-being and from self-reproach for failing to deal with his chemical dependency.

One episode stands out in my mind. When I was driving my son home from college, we stopped for lunch at a restaurant along the road. I walked in with my son. He was dirty, with long hair, ragged jeans, cigarette in the corner of his mouth, unshaven, arrogant. Even though the customers there were all unknown to me, I said to myself, "I hope to God they think he is a hitchhiker and isn't related to me." Throughout lunch I kept up the pretense that he and I were strangers. I was too ashamed of my own son to want to be seen with him and ashamed of myself for feeling that way.

**T**HE ROAD to rehabilitation of my son and his family that began about a year ago is intensive, long-term, and family-oriented. Treatment progresses in five phases, each of indeterminate length but with specific goals and criteria for completion. In the first phase my son came to accept that he had a drug problem and that he must take primary responsibility in overcoming it. During this time he did not live in our home but with the parents of another patient in the program who was further advanced in treatment. We parents received counselling at the same time on the nature of

"I gave him an ultimatum: Stop using drugs, or you will have to leave this house."

chemical dependency and on personal skills that we needed to help our son, and our family, become rehabilitated.

In the second phase of treatment, our son returned to our home, and we began to rebuild the relationships that had been distorted by drugs. He continued daily, intensive, group and individual counselling sessions, and we met twice weekly with a parent support group. This feature of the program—positive peer pressure and mutual support—is especially effective in helping the patient develop the commitment and strength to remain drug-free.

In succeeding phases the patient is carefully reintroduced into school or work, then into constructive use of leisure time, development of friendships with drug-free, caring people of similar age, and finally into service to others who are afflicted with chemical dependency.

Throughout this treatment, the focus is on the family as the first line of support in overcoming chemical dependency and in guarding against recidivism. While the chemically-dependent person must accept responsibility for his actions and his future, he comes to understand that his parents and siblings are a source of strength, support, and love that he can turn to in time of need. He learns that he can share his failings honestly and openly with his family and that humility in asking them for help is not weakness but the key to coping with his drug problem. This is crucial, since chemical dependency, like alcoholism, is never "cured." The potential of return to drugs always lurks below the surface.

"Chemical dependency is a disease that inexorably spreads to the rest of the family."

# PREVENTIVE MEDICINE

## For an Elusive Infection, Hope in a Vaccine

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“All children, especially those under 2, must be cultured and given IV antibiotics when this infection is suspected.”

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**I**NFECTIONS from *Hemophilus influenzae* type B (Hib) remain one of the few serious communicable diseases in children under age 6 years. Mortality due to these infections hovers around 5%, but acute and chronic morbidity is much higher. Early diagnosis and effective antibiotics contribute to the low mortality and help reduce complications. *Hemophilus influenzae* type B colonizes the upper respiratory tract, from where it gains access to the blood stream and invades the meninges, joints and lungs. Epiglottitis is also accompanied by bacteremia. Bacteremia always results in one of these serious infections.

Physicians caring for children appreciate how rapidly hemophilus infections develop and the difficulty of rapidly and objectively diagnosing this infection. All children, but especially those less than 2 years of age, must be cultured appropriately and receive intravenous antibiotics when this infection is suspected.

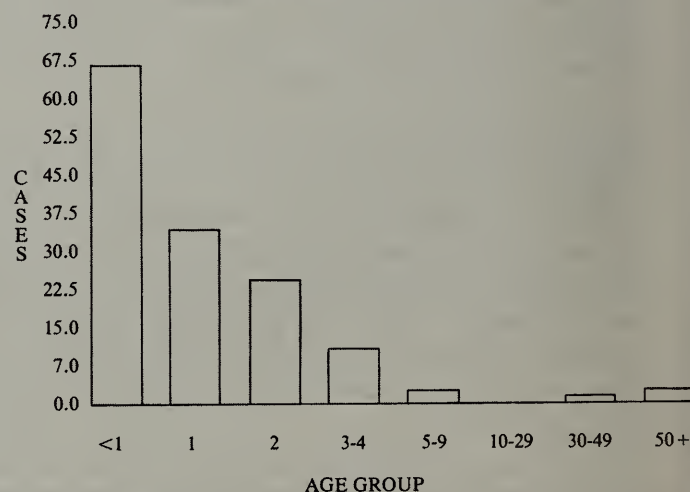
The recently licensed Hib polysaccharide vaccine may reduce the incidence of this disease. The vaccine was evaluated in Finnish studies in 1974.<sup>1,2</sup> After administration to 58,000 children there were no significant side effects associated with a single dose of the vaccine. The effectiveness of the vaccine leaves much to be desired. The vaccine was not effective for children less than 18 months of age. Approximately one-half of all cases of *H influenzae* disease occurs in this age group. Insufficient numbers of children between the ages of 18 months and 23 months were immunized to assess vaccine effica-

cy for this group. For all children immunized at 18 months or older, a 90% efficacy rate was obtained (95% confidence interval: 55% to 98%). The vaccine is most likely to be effective the first year after vaccination. There were no *H influenzae* infections among the vaccinees in the first post-vaccination year compared to 11 cases in the control group. In subsequent post-vaccination years there were two cases of the disease among the vaccinees and nine additional cases in the controls.

Based upon estimates of the percentage of invasive *H influenzae* infection occurring in children over 2 years of age (about 20% to 25%), assuming various levels of vaccine efficacy ranging from 25% to 90%, and assuming a retail cost for the vaccine of \$3 plus a \$10 administration fee, the Center for Disease Control did a detailed cost analysis for this vaccine.<sup>3</sup> Using these assumptions the vaccine may prevent as many as 2,500 cases of *H influenzae* disease per year if administered universally and be cost effective.

The CDC currently suggests immunization for all children at 2 years or at 18 months for the child attending a day care center.<sup>4</sup> This recommendation

Reported Cases of *H Influenzae*  
Meningitis by Age Group, Virginia, 1984



should be followed, but the physician must be aware that the vaccine will probably not protect every child. Every child with fever and signs or symptoms of serious illness should be evaluated thoroughly, regardless of whether that child has received the *H influenzae* vaccine and regardless of at what age the vaccine was administered. It will require many years of evaluation to establish the true efficacy of this vaccine.

Another problem with the vaccine is cost. The CDC cost effectiveness analysis was based upon a \$3 per dose retail cost. The vaccine is being distributed for \$6.80 per dose, over twice the CDC estimate! Hopefully, demand will reduce this cost significantly.

The physician caring for children can best serve his or her patients by providing the vaccine as currently recommended but realizing its actual efficacy is uncertain, and by keeping the cost of the vaccine minimal so that everyone may benefit maximally from its availability.

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but it can be kept in remission by use of the tools of personal change and with the reliance on family support learned during the course of treatment.

Thus, while I cannot tell you that a magic cure has been wrought, I can bear witness to the fact that it is possible to arrest and reverse the course of the disease. Our son is a healthy, alert, and responsible young adult. He has gained a maturity and wisdom I would never have thought possible as little as a year ago. Our family, too, is healthy and whole again. Though we bear scars, we have regained hope and confidence, and we have learned to fight our problem together, for as long as it takes.

#### COMMENT

This account of a young man and, most especially, his family, as he deteriorated into the lifestyle and vocational, social, and emotional devastation of drug addiction, is a classic and well-written description of the trauma to an adolescent personality and to his parents and loved ones. Drug addiction is especially difficult in adolescents because of the guilt experienced by the family, the frustration that family members feel in trying to alter the child's behavior, and the rejection of the child that can take place; moreover, a rejection can occur between husband and wife, severely damaging the marital relationship, as the parents are both suffering with the same distress and can react with anger and a turning away from one another. Fortunately in this case, adolescent suicide or suicidal behaviors were not features of the illness, although they very often are in such adolescent patients.

The main task of adolescence, namely the development of the capacity to cope with sexuality in the adult forms and the development of a sense of self, are grossly distorted by years lost in drug addiction and alcoholism. These lost years have to be worked through eventually, and a whole new set of expectations and relationships between the patient and the family has to be developed. The treatment is lifelong, as is the case with many other chronic illnesses. It is usually important to begin in a hospital setting in order to establish an initial therapeutic contact during a period of healthy sobriety where enthusiasm for conquering the illness can be engendered in the patient and the family.

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# Malpractice in Virginia: “Physicians’ Position Eroding”

Using the data from his study  
of medical malpractice in Virginia,  
economist Robert W. Cook, Jr., PhD, Richmond,  
framed these questions and answers.

## **Is the number of claims made in Virginia increasing?**

Yes, at a rate that approximates the rate of increase nationwide. In 1983 St. Paul reported 5,870 claims made in the country and 740 claims made in Virginia.<sup>1</sup> Nationwide the rate of increase from 1982 to 1983 was 12.92%, while in Virginia the rate of increase was 11.11%.<sup>1</sup> Compared to 1977, which was the period immediately following a malpractice “crisis,” claims made in 1983 were 87.48% higher nationwide and 79.17% higher in Virginia.<sup>1</sup>

## **Is the probability that a physician in Virginia will be a defendant increasing?**

Yes, although the probability that a Virginia physician will incur a claim varies greatly across specialties. When all specialties are weighted by their exposure rating, the probability that the average insured physician would incur a

claim increased from 1982-1983 by 9.11% nationwide and by 32.85% in Virginia.<sup>1</sup> This rapid rate of increase in Virginia during 1983 brought the state into parity with the rest of the country.

## **Is the severity of claims made increasing?**

Over the long run, yes, although due to the large increase in the number of claims made from 1982 to 1983, claim severity fell over that period. The average loss and loss expense in Virginia increased 32.1% from 1978-1979, 4.3% from

1979-1980, 16.6% from 1980-1981, 22.9% from 1981-1982, then fell by 7.1% from 1982-1983.<sup>1</sup> While the average loss in Virginia was only 76.8% of the average loss nationwide in 1978, it had risen to 82.6% of the national average in 1983. Over the five-year period severity was up 70.6% in the nation and 83.4% in Virginia.

## **Have total losses in Virginia risen?**

Yes, but less rapidly in 1983 than in the recent past. Total losses from 1978-1979 increased 32.6% nationwide and 50.8% in Virginia; from 1979-1980, 22.9% nationwide and 19% in Virginia; from 1980-1981, 24.3% nationwide and 42.6% in Virginia; from 1981-1982, 30.7% nationwide and 20.2% in Virginia; and from 1982-1983, 17.8% nationwide and 2.3% in Virginia.<sup>1</sup> This upward trend in the state continued into 1984. The Virginia Insurance Reciprocal reported in June of this year that the average loss paid on

Dr. Cook is chairman of the Department of Economics, E. Claiborne Robins School of Business, University of Richmond, VA 23173, where he may be addressed. The study from which he derived this text was commissioned jointly by The Medical Society of Virginia and the Richmond Academy of Medicine.

closed physician's professional liability claims increased 129% from 1984 to 1985.<sup>2</sup> This increase was moderate, however, when compared to the 310% increase from 1984 to 1985 in the average loss paid on closed claims in the hospital professional liability line.

#### **How much have premiums risen?**

The answer depends on the area of specialization; however, pure premium, which is an index of the amount that must be collected from each insured, increased from 1978-1979, 31.3% nationwide and 35.9% in Virginia; from 1979-1980, 20.7% nationwide and 13.8% in Virginia; from 1980-1981, 23.4% nationwide and 34.5% in Virginia; from 1981-1982, 29% nationwide and 31.1% in Virginia; and from 1982-1983, 14.3% nationwide and 23.4% in Virginia.<sup>1</sup> In 1978 Virginia's pure premium was 71.9% of the national average and in 1983 Virginia's pure premium as 83.9% of the national average. Over the five-year period premiums nationwide rose 188% while in Virginia premiums rose 237%.

Despite these increases, it does not appear that premium levels have entered a stationary phase. Preliminary data submitted by St. Paul Fire and Marine in May of this year indicate substantial premium increases may be necessary. Additionally, the premium increases may not be limited to the traditional "high risk" specialties. An increase of 22.6% was proposed for the Family GPs/no surgery class and an 11.7% increase was proposed for emergency medicine specialists. In the high risk areas, increases of 12.6%, 33% and 24.2% were proposed for neurology, ob-gyn, and cardiovascular surgery respectively.<sup>3</sup> The total proposed rate change for all classes was 15%.<sup>3</sup>

#### **How much of the premium paid by physicians actually reaches the plaintiff?**

In 1983 it was reported that plaintiffs in Virginia received 50% of the premium dollar.<sup>1</sup> Surprisingly, this is not only 3% less than the national average in 1978,<sup>1</sup> it is also 6% less than the national average in 1983. Preliminary data indicate there was no improvement in the payment ratio during 1984.

The Virginia Insurance Reciprocal reports that of the total loss and loss expense paid on closed claims during 1984, only 47% reached the plaintiff.<sup>2</sup> Measured against all plaintiffs nationwide, Virginia's injured persons are now receiving a smaller proportion of the premium dollar today than they were five years ago.

#### **Are the insurance companies making a profit?**

Yes, and based on the experience of St. Paul and the Virginia Insurance Reciprocal, there is no likelihood that malpractice insurance will not be available. Both of these firms are rated A, or excellent, by the Best insurance rating service, which is the standard in the industry.

St. Paul's experience nationwide is quite different from its Virginia experience. In 1983 the St. Paul reported an underwriting loss on all insurance lines of \$232 million. This loss was offset, however, by investment and other income of \$262 million for a net operating income of \$29 million. More interesting is the fact that 1983 premium revenues were insufficient to pay 1983 losses and expenses.<sup>4</sup> The actual 1983 contribution to funds from underwriting was -\$2.8 million.<sup>4</sup> Unfortunately, the investment income is not credited on the operating statement to individual state accounts; however, a present

value calculation based on the assumptions made in St. Paul's 1984 rate filing indicates that the Virginia account showed a before-tax profit equal to 18.9% of sales in 1981, 11.5% of sales in 1982, and 11.4% of sales in 1983.<sup>1</sup>

The Reciprocal's performance has also been favorable. In 1979 the firm reported an underwriting profit of \$678,000 and net investment income of \$621,000 for a current return of 14.4% on sales. In 1980 underwriting profits were \$54,000 and net investment income was \$1,304,000 for a return of .79% on sales.<sup>4</sup> In 1981 underwriting profits were \$963,000 and net investment income was \$2,229,000 for a return of 10.7% on sales. In 1982 underwriting profits were \$1,716,000 and net investment income was \$3,137,000 for a return of 17% on sales, and in 1983 underwriting profits were \$1,029,000 and net investment income was \$3,699,000 for a return on sales of 8.74%.<sup>4</sup> In 1983 premiums received by the Reciprocal exceeded losses, loss expenses and other expenses by \$4,915,142, enabling the firm to pay \$812,737 in dividends and retain \$4,102,405 in funds from underwriting.<sup>4</sup>

While the Reciprocal does not enjoy the diversification of lines which St. Paul can utilize to offset losses in a single line of business, this sometimes works to the Reciprocal's advantage. For example, the St. Paul experienced unusually high losses in the second half of 1983 due to the effects of winter storms and Hurricane Alicia; these storms had little, if any, impact on the Reciprocal's operation.

#### **Are the insurance companies over-reserved?**

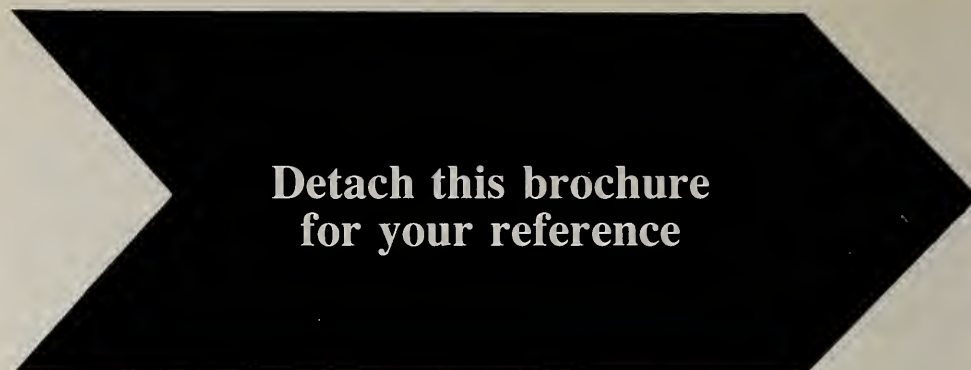
The answer depends on four factors: 1) the statistical technique used to forecast future losses; 2) the time period over which pay-

ments are made; 3) the rate of payment in each time period; 4) the rate of return on investment.

The first factor is a matter of knowledge and choice. Presumably the actuaries which chose the forecasting technique are familiar with more rigorous methods and have chosen the naive trend line technique for simplicity or ease of exposition. The forecasts have not been very accurate. In this industry, unlike most other industries, one period errors are not extremely important, due to the temporal characteristics of losses incurred. Because it takes ten years to incur actual losses, there is an intertemporal period in which to correct for forecast errors. For example, a cycle of underreserved followed by overreserved periods may imply long-run reserves are equal to long-run losses.

The other three factors are calculated from historical data and extrapolated into the future. Current losses may not develop over ten years, and even if the payment period is ten years, the rate of payment may be different in the future than in the past. Similarly, future rates of return may be greater than or less than 10%, which is the assumed rate of return used in St. Paul's 1984 Virginia rate filing. At present, both St. Paul and the Reciprocal have more than adequate reserves to pay out current claims made. However, if the payment period is shortened, or the rate of payment is accelerated, or the rate of return is less than 10%, reserves could be inadequate.

In 1983 the industry encountered this last difficulty., St. Paul's portfolio during that year yielded a 12.6% return on cash and short-term investments, 8.6% return on bonds, 10.3% return on preferred stock, 4.7% return on common stock, and 10.5% return on mortgage loans. While these rates of return ranged from above 10% to



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below 10%, 72.4% of the portfolio was in bonds and common stocks which earned less than 10%.

The Reciprocal's 1983 portfolio yielded 26.5% on cash and other investments, 12.3% on bonds, 3.6% on common stock and -1.4% on other investments. Seventy-three percent of the portfolio was in bonds and 7.7% of the portfolio was in cash and short-term investments.

#### **Are many of the claims frivolous?**

It depends upon your definition of frivolous. From 1981-1983 all medical malpractice carriers reported a total of 4,160 claims closed in Virginia. Of the claims reported, 3,275, or 78.7% were closed with no payment.<sup>5</sup> I do not know at what point the claims closed without payment were decided. Some may have been abandoned with no effort on the part of the plaintiffs, while others may have been the result of a zero jury award after extensive litigation. If Virginia is representative of the nation, and the above mentioned data indicate the Commonwealth is rapidly losing its status as a low risk state, then 64% of all defense expenditures are allocated to those claims which arise out of treatment where the standard of care is met.

#### **Is the physician-defendant penalized because his or her average income exceeds that of all other professionals?**

I do not know. The malpractice claim amount to automobile claim amount ratio varies from 9 to 13 for the same type injury, and the malpractice payment to the automobile personal injury payment ratio varies from 4 to 6 for the same type injury. The statistical correlation between income and these ratios has not been demonstrated.

#### **What does medical malpractice litigation cost the public?**

To answer, one has to understand the difference between accounting or pecuniary cost, transfer payments, and economic cost. The total accounting cost is equal to the premiums collected from the physician. In Virginia, 50% of these premiums are returned to the injured patients so the transfer payments are 50% of premium cost. This means the total transaction costs are also 50% of premiums collected. Add to this public expenditures to support the court system; defensive medicine, which I have estimated as 10% of expenditures on physician services; the opportunity cost of the physician's time spent on the case; the cost of lobbyists, economists, and others engaged in the industry; and the sum is large. Subtract the increase in care that results from the threat of a claim--physicians have been extremely tentative in policing their own industry--and the economic cost may be quite small.

### Would removing the cap have any effect on the market?

Yes, and the effect would be significant.<sup>22</sup> First, some individuals would receive larger awards. Second, physicians would purchase more coverage.<sup>6</sup> Third, there would be more claims.<sup>6</sup> Fourth, more time and effort can be expended on claims and, therefore, the expected value of claims would increase.<sup>6</sup> Fifth, premiums would increase.<sup>6</sup> Finally, severity might increase or decrease depending upon the rate of increase in the number of claims made. A cap on awards is the single most effective means to hold down the number and size of claims.

### What is the effect of the contingency fee method of payment?

First, it is a highly effective and efficient method for the injured person to overcome an imperfect capital market.<sup>7</sup> Second, it allows the plaintiff to monitor the activities of his attorney. Third, it encourages low probability and small damage claims.<sup>7</sup> Fourth, it promotes a conflict of interest between the injured person and that person's attorney which may mitigate against the monitoring advantage, that is, attorneys are unwilling to accept settlement offers which fully informed plaintiffs are willing to accept.<sup>7</sup>

### Is there a malpractice crisis?

If we define crisis as the unavailability of malpractice insurance, the answer is no. If we define crisis as the unavailability of medical care, the answer is no. The question of what constitutes a crisis is difficult, as the definition is subjective rather than objective. For example, readily available malpractice insurance at a low premium will appear to the medical profession as an indicator that the mal-

practice market is healthy. The same evidence will be interpreted by the plaintiff bar as indicative of the large number of injured persons who are denied recovery under a malpractice system that is inequitable. What is required is a standard of measurement.

If we chose, quite arbitrarily, the past five years as our period of measurement and claims made, frequency, severity, pure premiums and carrier income as our units of measurement, it is clear that the physician's position has eroded significantly in Virginia. From the plaintiff bar's perspective the market has become an attractive one. From the insurance carrier's perspective much of the difficulty can be overcome in the short run by raising premiums.

The availability of insurance at higher rates has led the Association of Trial Lawyers understandably to question the existence of an insurance crisis. Simply writing the same amount or more malpractice insurance at increased premiums is not, however, an attractive prospect for the insurance industry. An insurance firm, like most firms, will limit the percentage of its assets exposed in a single area to prevent portfolio imbalance. The St. Paul Fire and Marine provides an excellent example. In 1979 their loss ratio for all lines was 58.6% as compared to 51.1% in their medical malpractice line.<sup>8</sup> Medical malpractice at that time accounted for only 10.4% of St. Paul's sales.<sup>8</sup> In 1983 their loss ratio for all lines had risen to 67.4% and for malpractice to 79.7%.<sup>8</sup> More importantly, malpractice premiums accounted for 20.3% of their sales.<sup>8</sup> When a single line accounts for one-fifth of a firm's sales and that line exhibits a loss ratio 12% higher than the average for all lines, portfolio imbalance may be a problem, and one solution for the St. Paul would be to limit their exposure in the malpractice

area. From the physician's perspective, this type of retrenchment will be viewed as a crisis.

All of this fails to account for the impact of an inefficient malpractice system on consumers. Ultimately, this group will bear the cost of the inefficiency. For consumers, the cost of medical care will increase and the availability of high risk medical procedures and treatment will be diminished. As a result, there will be fewer injuries resulting from medical care and more suffering as the result of no medical care.

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# Hypertension in the Elderly

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In people over 60, hypertension carries high risk of complications, but there is evidence that sustained reduction in high blood pressure will reduce the incidence of stroke and congestive cardiac failure. The author makes specific recommendations as to treatment choices, emphasizing that their benefits appear to outweigh the modest costs in unpleasant side effects and in money.

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Consideration of hypertension in the elderly requires definition of elderly and of hypertension, the latter in the sense of whether the blood pressure requiring treatment in the elderly is different from that leading to action in the young.

"Elderly" is a polite substitute for "old," tiptoeing around fear of helplessness and death. "Old" comes from *ault*, the past participle of the Latin verb *alere*, to grow, so that "old" originally meant grown. "Eld" and "ald" (as in *alderman*) are also derived from *ault*, presumably by inter-observer variability in auscultation. *Adult* was the past participle of *adalere*, to grow to, or in modern English to grow up. So, *older* and *elder* mean more grown, more wise, thoughtful, considerate and generally wonderful. With this consoling definition, I can at age 60 accept the choice of all the well-designed

studies of hypertension in the elderly<sup>1-4</sup> of 60 years as the onset of old age.

Hypertension in people over 60 seems more similar than different from hypertension in middle age; differences and similarities will be considered under the headings of definition, cause, prevalence, complications and efficacy of treatment, and choice of drugs.

## Definition

Hypertension means elevation of systolic and diastolic arterial pressure; isolated systolic hypertension is always considered a separate problem and is discussed in a later section of this paper. Everyone clearly recognizes that the higher the blood pressure, the greater the incidence of complications and the likelihood of benefits from reducing pressures, and that 160 mm Hg is not significantly worse than 159, nor 180 than 179. There is nonetheless a strong wish for a simple criterion for the diagnosis of hypertension. Most have selected 160/90 or /95 as levels above which effective reduction in pressure is likely to reduce the rate of complications of hypertension. This dividing line seems as

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reasonable in deciding on treatment in the elderly as in the younger, though as we shall see, hypertension so defined becomes extremely common above age 60.

### Cause

Since arteriosclerosis advances with age, renal arterial stenosis becomes more common in association with hypertension in the elderly. In 200 consecutive patients over 50 undergoing renal angiography as an adjunct to cardiac catheterization done primarily for cardiac symptoms, renal arterial narrowing of 50% or more was present in 18% of the 87 hypertensives.<sup>5</sup> Especially when the hypertension develops after age 60, search for stenosis of a renal artery seems warranted. In at least 75% of elderly hypertensives, however, the causes of the high blood pressure are as unknown as in younger hypertensives.

### Prevalence

Elevation of systolic plus diastolic arterial pressure is common in the elderly. For residents of the United States aged 65-74 in 1971-1974,<sup>6</sup> the data are as follows:

Percentile	Black		White	
	Systolic	Diastolic	Systolic	Diastolic
50th	155	89	147	94
75th	178	99	162	92
90th	194	110	180	100

Thus about 25% of elderly Americans have blood pressure high enough to warrant serious consideration.

### Complications and Efficacy of Treatment

Especially in the elderly, hypertension is a major predictor of cardiovascular illness and death. In Framingham men aged 65-75, the probability that cardiovascular disease would become manifest in eight years was 10% with systolic blood pressure at 105, 20% at 165, and 30% at 195 mm Hg. Stroke was almost four times as common with blood pressure above 160/95 in contrast to less than 140/90.<sup>7</sup>

In the Veterans Administration cooperative study of antihypertensive treatment,<sup>17</sup> 40% of men with entry ages of 50-75 years and diastolic blood pressures of 90-105 mm Hg developed a morbid or mortal event within three to five years if given placebo. Considering all the subjects of the VA study whose diastolic blood pressures ranged from 90 to 114 at entry, the complicating events were distributed as follows:

Age at Entry	<60		60-75	
	A	P	A	P
Number entering	148	151	38	43
Number with CVA	2	10	3	10
Number with CHF	0	2	0	9
Number with CAD	6	8	5	5

Note the prevalence of bad events in patients over 60 at entry. The benefit of active treatment (A) was at least as marked in them as the younger patients. CAD means myocardial infarct or sudden death. P = placebo.

The Australian Study of Treatment of Mild Hypertension<sup>2</sup> followed 582 men and women over age 60 with pretreatment blood pressure <200/95-110 for about three years, with half receiving placebo and half on active drugs, chlorothiazide 500-1000 mg daily with methyldopa, propranolol, clonidine or hydralazine added as needed to achieve diastolic blood pressure less than 90 mm Hg. The patients receiving active drugs had lower blood pressure and 40% fewer bad events. The morbid events were death (10-20% of the total events), heart failure, CVA, TIA, myocardial infarct, new angina, or new ECG ischemia.

	Active	Placebo
Number at entry	293	289
Diastolic BP at 3 years	87	94
CAD events	23	28
Cerebrovascular events	8	12
Other events	6	9

The rate at which all trial end points, fatal and non-fatal, developed in the patients on active treatment was about 60% of that in the patients receiving placebo, a difference which was statistically significant.

The European Study of High Blood Pressure in the Elderly<sup>3</sup> followed 840 men and women over age 60 with entry blood pressure 160-239/90-119 (average 182/101) who were randomly assigned to placebo or active treatment with hydrochlorothiazide 25 mg plus triamterine 50 mg daily. The dose of diuretics was doubled and methyldopa 250-2000 mg daily added if necessary to reduce diastolic blood pressure below 90 mm HG during followup, which averaged five years. The patients on active treatment had lower blood pressure and fewer morbid events as follows:

	Active	Placebo	P
Number at entry	416	424	
BP at 5 years	150/85	171/95	.001
Fatal events			
Cerebrovascular	12	19	.15
Myocardial infarct	7	16	.05
Other cardiac (includes sudden death)	10	13	.44

Non-Fatal Events			
Cerebral thrombus	5	12	.03
Cerebral hemorrhage	4	3	
Cerebral embolus	2	2	
TIA	8	15	.08
Pap. hem. exudates	0	5	
Myocardial infarct	19	12	
Severe CHF	7	17	.01
BP > 239/119	1	15	.001

157 of 424 patients receiving placebo developed unwanted events during five years of followup, emphasizing the severe prognosis of uncontrolled hypertension in the elderly. Cerebrovascular disease and heart failure were significantly reduced by active treatment.

Each of these multicenter trials leaves reservations about the efficacy of antihypertensive treatment. None showed significant decrease in total mortality in patients receiving active drugs. But the evidence provided by all three together and supported by similar findings of the Hypertension Detection and Followup Program<sup>4</sup> suggest that systolic plus diastolic hypertension in the elderly rapidly leads to major cardiovascular illness which can be reduced by reduction in blood pressure, at modest cost in adverse effect of drugs or in money.

These trials suggest benefit for elderly patients even when blood pressure is not markedly elevated, i. e., diastolic pressures of 95-105 mm Hg. The unimpressive benefits in the recently reported Medical Research Council trial of treatment of mild hypertension<sup>8</sup> are not directly applicable to the elderly, since the MRC patients were aged 35-64 and the events rates were low in the placebo-treated patients. As pointed out above, the incidence of untoward events is much higher in untreated elderly patients, and benefit from treatment is more likely to be obvious in a short period of followup, such as the five years in the MRC trial.

### Choice of Treatment

**Goals.** The Australian and European trials both aimed for reduction in diastolic blood pressure below 90 mm Hg, the same goal as is generally used for younger patients. All these trials also demonstrate achievement of the real goal of treatment of hypertension, namely, reduction of severe illness with its accompanying terror and loss of freedom.

**General tactics.** Renal function declines with age, with reduced ability to excrete drugs. Body water and plasma volume are also low in the elderly. Lower-than-usual drug doses are needed. Baroreceptor sensitivity decreases with age, and orthostatic hypotension is a severe problem for the non-agile elderly. Drugs with prominent reduction in standing

blood pressure (prazosin, guanethidine) require special care. Memory is impaired more frequently in the elderly. Simplicity of regimen and enlistment of young family or of professionals who will visit the home are valuable. Recognition of the soporific, perhaps mind-clouding, effects of antihypertensive drugs such as reserpine, methyldopa and clonidine is necessary in some patients.

**Non-Drug Treatment.** 1) Weight Loss. Hypertensive patients more than 10% above ideal body weight will achieve clinically significant reduction in blood pressure if they can lose weight, roughly 2-3 mm Hg reduction in systolic pressure and 1 mm Hg reduction in diastolic pressure for every pound lost.<sup>14</sup> This effect does not depend on the restriction of salt intake, nor on age.

2) Salt restriction. Reduction of salt intake to the 70 mEq per day range, which requires that no salt be added at table or in cooking and that salt-laden foods be eliminated, is accompanied by significant but modest reduction in blood pressure, from 154/97 to 144/92 mm Hg in an elegant study<sup>15</sup> of 19 people aged 30-66. Other investigators<sup>16,17</sup> report similar findings.

3) Exercise. Chronic exercise appears to have little effect on blood pressure except as it assists with weight loss.

**Selection of drugs.** Controversy currently surrounds the choice of drugs for the treatment of hypertension at any age. Diuretics have lost favor because of their adverse effects on metabolism, namely, impaired glucose tolerance, hyperlipidemia and hypokalemia. Worry about the hypokalemia was fanned by the observation by the Multiple Risk Factor Intervention Trial<sup>9</sup> of increased sudden death in a subgroup of patients with hypertension and EKG repolarization abnormalities at entry who received intensive treatment with thiazide diuretics. Thus the initiation of drug therapy for hypertension is more complex than a few years ago, when diuretics were always the first choice. At present, one must select by trial among several groups of antihypertensive drugs a regimen which is effective in lowering the blood pressure of the individual patient and produces minimal unpleasant effects. Angiotensin converting enzyme inhibitors (captopril and enalapril), beta-blocking agents, and calcium channel blockers are commonly used initial drugs.

Thiazide diuretics are still used as first drug by many, especially in the United States, because of their efficacy in reducing blood pressure, their low production of unpleasant symptoms, and their low cost. In patients who need two antihypertensive

drugs, a thiazide diuretic will surely be one.

There is at present no suggestion that choice of antihypertensive drug is different for patients over age 60 than for younger people.

### Isolated Systolic Hypertension

Blood pressure  $>160$  systolic and  $<90$  diastolic occurs in about 8% of US citizens aged 65-74 based on the average of three measurements by a physician at one visit.<sup>10</sup> Isolated systolic hypertension is more common in women (12%) than men (4%), and about equally common in blacks and whites. It was even more common in Framingham from 1948-1968, occurring in 10% of men and 20% of women aged 70-74 and 30% of men and women aged 80+.<sup>11</sup>

In Framingham men and women aged 55-74 at entry, mortality ratio was twice as high in those with blood pressure  $<160/95$  as in those whose pressure was below  $140/90$ ; women died of cardiovascular disease five times faster with isolated systolic hypertension than with normal blood pressure.<sup>11</sup> In Chicago, isolated systolic hypertension  $>180$  increased the risk of stroke and of death from coronary disease by about 2.5 times in persons 65-74 years old, compared with those of similar age with lower blood pressure.<sup>12</sup>

There are no data on efficacy of treatment in reducing morbidity and mortality. Isolated systolic hypertension probably results from stiffening of aorta and larger arteries and may be merely a marker of arterial stiffness, though it surely increases cardiac work and strain on the left ventricle, and should accelerate arteriosclerosis and favor stroke.

There is little controlled information on the efficacy of drugs in reducing blood pressure in isolated systolic hypertension, though what we have suggests that in isolated systolic hypertension drugs reduce systolic pressure more than diastolis.<sup>13</sup>

### Summary

In people older than 60 years, hypertension, defined with the same limits used for younger people, is very common and carries high risk of development of a severe complication within a few years. The evidence is reasonably strong that sustained reduction in high blood pressure will reduce the occurrence of stroke and congestive cardiac failure. Coronary disease is not likely to be ameliorated, and death is not clearly delayed. The benefits of treatment appear to outweigh the modest costs in unpleasant effects of drugs or in money. Choice of antihypertensive drugs is not different in the elder-

ly, though lower doses are indicated, at least in beginning treatment.

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# VIRGINIA MEDICAL EDITORIAL

## The Rest of the Story

Not so long ago a colleague told me that he was concerned because one of his children had decided to go to medical school. I was surprised that he reacted negatively to the decision, rather than with the joy and pride I would have expected. His reaction, it turned out, was largely based on his fears about what he saw as the increasing involvement in his practice of the government and the third-party insurers. His other concerns were about the professional liability problems and the difficult moral and ethical issues of the day, such as abortion, rationing of care and, the big issue of the time, cost containment.

The rate of change in our professional lives surely rivals that of our fathers, grandfathers and great-grandfathers, who saw the introduction of effective surgery from 1870 to 1900, withstood the upheaval surrounding the change of medical education from 1900 to 1920 epitomized by the Flexner report, and witnessed the dawning of the era of effective medications from 1930 to 1950. Those revolutions were unquestionably disconcerting, but we see them largely, if not completely, as positive developments. We need at least to consider that the current upheaval will be viewed similarly by those who succeed or supplant us. Let us look at some recent changes that look positive.

At the top of my list is the increasing sophistication of the general public regarding disease processes and medical treatment. Who would dispute the joy that one feels when working with a patient who has a good grip of facts that prompt a particular course of treatment and who is motivated through the informed decision to follow through? The physi-

cian gives up the illusion of total control and total responsibility—and with it the temptation to arrogance and imperiousness that work to destroy the essentials of our service to others, humility and tact.

Similarly, we benefit on a daily basis from the burgeoning skills of the nurses and other paraprofessionals who join us in our work. Floor nurses manage hyperalimentation lines and solutions, participate in cardiopulmonary resuscitation (let's be honest, some of them run "codes" better than we do ourselves), and warn us of significant changes in patient status. Nurse practitioners, stoma therapists, patient education coordinators, surgical assistants, endoscopy assistants, respiratory therapists, hospice workers and CAT scan operators are only a very few of those who help to make our hospitals vibrant centers of healing.

The equipment we use astounds and delights us in its complexity and elegance. The operating endoscopes, implantable devices and replacement parts, arthroscopes, and other wonders of science are no longer conveniences but necessities of our current practice, allowing us to manage patients in ways far superior to anything imaginable a few short years ago. The resources of many segments of our economy are available to us and to our patients through the efforts of research laboratories and manufacturing plants throughout the country.

Through the efforts of our medical societies and specialty groups, we are caring for ourselves in better fashion. Doctors, of all professions, have the best record in cessation of cigarette smoking. We are setting good examples for our patients in dealing

with our own problems with diabetes, hypertension and excess weight. Through our support of a variety of athletic activities and through our publicly expressed concern over the consequences of violent sports, we are making a contribution to the health of the nation that goes beyond our individual practices. We have an active surveillance program to identify impaired physicians. Chemically-dependent physicians are identified, confronted and given acute care, with excellent rates of maintenance of recovery.

Significant problems remain. New problems will spring up. The only certainty is continued uncertainty and a state of "unsettledness." The core of our professional lives must be and remain our devotion to the Art, to our patients and to our colleagues. The Healer in all of us must not be allowed to succumb to the distractions of technology and the market place. In our daily lives, through the vicissitudes of fate and the turmoil of change, we add our examples to untold generations of physicians who preceded us. Through that example, be it for good or bad, we attract the next generation, our bridge to the future. Let us show them our resilience and adaptability as we fight our fears and disappointments.

HARRY W. EASTERLY III, MD

## Best Medical Care

**Y**OUR BEST CHANCE for the best medical care today is as follows:

1. You pick out your physician. How you do this is up to you. One lady told me that she chose her present doctor because he looked more like a bulldog than anyone she had seen since her family physician had died. They enjoyed a valuable relationship for many years.

2. You make an appointment with him.

3. You keep this appointment.

4. You go into his office, close the door, and sit down.

5. He takes your history, examines you, and has done whatever laboratory tests he considers necessary. Contrary to what some say, these tests should include an X-ray of the chest.

6. He expects to be paid and you expect to see that he is paid.

7. Thereafter you seek no medical care without his knowledge and/or advice.

8. You never never never take any medicine he does not prescribe.

KINLOCH NELSON, MD

1621 Hanover Avenue  
Richmond VA 23220

## The End of an Era

**I**F you have been reading the state newspapers or the editorials in *VIRGINIA MEDICAL*, you are aware that the State Board of Medicine is in the process of change. One of these changes may involve the office of secretary-treasurer.

There has been a secretary-treasurer of the Board since Dr. R. S. Martin was appointed to the post in 1908. Exactly what the duties of the office were at that time is not known, but by the time Dr. J. W. Preston, Roanoke, began his tenure in 1917, a position that he held for 30 years, the holder of the post was a virtual czar. Dr. Preston and his successors, Dr. K. D. Graves, also of Roanoke, and Dr. Russell Cox, Portsmouth, ruled the practice of medicine in Virginia.

Increased public interest, a sign of the times, and resultant legislation have dictated great changes in the manner in which the State Board of Medicine and its secretary-treasurer now operate. The secretary-treasurer is no longer a "czar", but a leader, and Dr. George J. Carroll, the incumbent for the past 14 years, is precisely that.

The position is described as a part-time one and the remuneration is commensurate. However, during the past few years the work load of the Board has undergone an alarming increase, and the responsibilities of the secretary-treasurer have risen concomitantly. During all this time, Dr. Carroll has functioned at a high level of competency,

Dr. Carroll knows medicine in Virginia. He loves the work of the Board and the profession of medicine. He is dedicated to the goal of providing the best possible medical care for the people of Virginia, and he will not accept less.

Suggested changes in the Board structure include a full-time medical director, and the advantages of having someone in this capacity are obvious. However, there is considerable doubt here that there will be anyone who will function with greater efficiency than George Carroll. The people of Virginia are fortunate that he has been there.

EDWIN L. KENDIG, JR., MD

# HISTORICAL NOTES

## Early Physicians of Augusta County

**T**HE upper Shenandoah Valley, in which Augusta County is located, is said to have been first visited by a German physician in 1669,<sup>1,2</sup> first explored by a group of Englishmen in 1716,<sup>3</sup> and first settled by Europeans in 1726.<sup>5</sup>

Dr. John Lederer is the physician often credited as the first European to see the Valley of Virginia. On an expedition to the Piedmont and Blue Ridge Mountains, he noted in his diary on March 14, 1669, the appearance of "the Apalatean Mountains."<sup>1</sup> North America was described in those days as being divided into three parts—the flats, the highlands, and the mountains, called by the Spaniards "Apalatean."<sup>4</sup> Dr. Lederer crossed the Shenandoah Valley and reached the mountains on the 17th of March.

The name of another physician, Dr. Thomas Walker, is also associated with early geographical discovery in this area. While serving as a commissioner to locate a large land grant, he made what is considered to be the first definitive description of the Cumberland Gap on April 13, 1750.<sup>2,5</sup> Gabriel Arthur had travelled through the gap in 1674 and Daniel Boone first crossed through it into Kentucky in 1769.<sup>2</sup>

Augusta County's old records contain scattered references to physicians in the early days.

**F**ROM 1745 to 1749 the name of Dr. Robert Foyles (Foyle, Foil, Foile) appears as a legal witness in court and from 1746 to 1752 Dr. John Flood's name appears, also as a legal witness. Dr. Foyles and his family moved to the Monongahela River area south of what is now Pittsburgh. The "Register of persons who have been either killed, wounded or taken by the enemy in Augusta County" during the French and Indian War of 1745 carries this grim line: "Robert Foyles, his wife and 5 children, at Monogalia, killed."<sup>6</sup>

**W**ILLIAM Lewis (1724-1811) is the next known physician in the area. He was the fourth son of John Lewis, who founded Staunton in 1732, and

Margaret Lynn Lewis. Born in Donegal County, Ireland, William Lewis arrived in Augusta County when he was 8, was educated in Virginia and Philadelphia, and began practicing medicine in Augusta County in 1754. He was wounded at the Battle of Duquesne, where Braddock was defeated in 1755, and served as an officer in the Revolutionary Army until November 1781.

Dr. Lewis lived in Augusta County in his father's homestead, "Fort Lewis," but in 1786 moved himself and his family to Sweet Springs, then in Botsford County but now Monroe County, West Virginia, and it was there he died. Known as "Colonel William Lewis, the Civilizer of the Border," he was a man of exemplary professional, moral and religious character and exerted a real influence in his community. He was the direct ancestor of the Richard P. Bell family of Staunton and in this family line was the first of more than 20 physicians.<sup>7</sup>

**I**N Chalkley's Records of August County two references, one in 1762 and one in 1768, are made to Dr. Thomas Lloyd (1731-after 1794).<sup>6</sup> Dr. Lloyd was born in Birmingham, England, attended Cambridge University, and studied medicine with Dr. Edmund Hector,<sup>8</sup> whose father, also a physician, delivered Samuel Johnson, the famous "Dr. Johnson," in 1709.

Dr. Lloyd was well connected but became disgraced and sold himself into slavery, a not uncommon practice in those days; evidently he committed some severe offense and rather than go to prison offered himself as an indentured servant to America. This meant that he was a slave, but for a term limited by contract, in his case, for five years. His first master was Col. James Patton<sup>8</sup>, who as county lieutenant commanded all the militia in Augusta County. When Patton was murdered by Indians in July 1775 during the Draper Meadows Massacre at the present site of the campus of Virginia Polytechnic Institute/State University, Dr. Lloyd was passed on to Colonel Patton's nephew, Captain William Preston, under whom he served out the last

four years of his servitude. On May 2, 1759, Lloyd became once again a free citizen of Augusta County and was appointed clerk of the county's courts-martial.

Little is known of Dr. Lloyd's practice, but one gains the impression that he practiced more in the Holston area than in the upper Valley of the Shenandoah. In a letter to Edmund Hector while an indentured servant, he wrote: "I was Surgeon to 300 men who went out against the Shauneeb Indians Town," and he inquired as to "whether you sent the money or know [not] or the Launces and Instrument Case. . .and a Bistoury. I beg you do it if you can. . ."<sup>9</sup>

There are references to Dr. Lloyd's "cures and heelings." In 1762 "he was sued by Margaret Woods and the sheriff attached his complete medical stores," which included "one bottle of rhubarb, one paper of rhubarb, 14 boxes of Lockyer's pills, 3 bottles of Daffy's Elixir, some spirits of hartshorn, two papers of senna, one paper of black brimstone, one galley pot and a vial."<sup>6,8</sup>

Warrants of land awarded as bounty for service in the colonial army caused Dr. Lloyd to live in Fayette County, now in Kentucky.<sup>8</sup> "Dr. Thomas Lloyd produced sufficient proof that he is entitled to 200 acres of land for Military Service under the King of Great Britain's Proclamation of 1763," say the records of the Montgomery County court dated November 3, 1779.<sup>10</sup> He continued his friendship with Captain Preston's family for many years; his last recorded letter to John Preston, son of the captain, was written on September 16, 1791.<sup>8</sup>

**K**NOWN as practicing physician in Albemarle and Amherst (now Nelson counties, Dr. William Cabell (1699-1774) also practiced in the Staunton area between 1763-1767, according to Chalkey's Records.<sup>6</sup> Dr. Cabell was born in England in 1699 and was said to have graduated from the Royal College of Medicine and Surgery in London.<sup>11</sup> He settled in Virginia about 1723.

The record contains many references to his practice. Of one patient he is quoted as saying, "As Moses Bowen's wound had been received in defense of his Country, the Country would pay him for curing Moses", i.e., the physician would be paid by the government. Another references states that "if patient died, Dr. Cabell's artisans supplied the coffin and buried him", and an item in a case book reads, "To coffin, sheet and interment £2-11s6d."<sup>11</sup> Blanton says that Dr. Cabell "charged from 1-5 pounds a visit, according to the distance. His charge for amputating an arm or leg was £7-10s. If

he guaranteed a cure the charge was from 12-15 pounds."<sup>11</sup>

**A**NY discussion of the early physicians of Augusta County must include Dr. William Fleming (1728-1795), whose diverse accomplishments as physician, soldier and statesman have been well documented<sup>13,14</sup> and who was Virginia's acting governor in 1781 between the terms of Thomas Jefferson and Thomas Nelson. This occurred while the General Assembly was meeting in Staunton, where Dr. Fleming practiced medicine from 1763 to 1768.

**P**EACE with England came in 1783, and that year also marked the arrival in this country of Dr. Alexander Humphreys (1757-1802). Born of Scottish parents in Ulster Province, Ireland, and graduated in medicine from the University of Edinburgh, Dr. Humphreys began his practice in Augusta County in the vicinity of Greenville, near an older brother who had come to America in 1764, but in 1787 he moved to Staunton and the following year married Mary, the daughter of the Rev. John Brown of New Providence Church.<sup>6</sup>

Dr. Humphreys soon became a prominent citizen. Chalkley's Records for 1745-1800 amply testify to the varied matters, medical and non-medical, that occupied him. On the establishment of an office, March 22, 1788: "Lease is granted to Dr. Alexr. Humphreys to build an elaboratory [sic] on the prison lot, on such part thereof as may be designated by Commissioners." Three years later, on June 21, 1791: "Motion of Michael Garber that Alex Humphreys' [work] shop built on the public ground by order of Court be removed as a nuisance is dismissed." A month later, on July 19: "Alex. Humphries [sic] has leave to lease for eight years to come the house and enclosure he now occupies on the prison lot, for the purpose of indemnifying him for erecting the said building & c., at the expiration of which term all the improvements are to be the property of the County."<sup>6</sup> In 1793 Dr. Humphreys employed an apothecary, George McIntosh, but after a year or so, McIntosh defected and entered the private practice of medicine.<sup>13</sup> Humphreys went to court: "May 1796 Alexander Humphreys vs. George McIntosh. . .suit to compel defendant to return to plaintiff's service as an apothecary. Letter from George McIntosh dated Edinborough [sic], February 27, 1793, contracting with plaintiff to come to Staunton and be his apothecary for four years."<sup>6</sup>

The name of Dr. Humphreys lives in history through his association with the early cesarean

section performed in 1794 by Dr. Jessee Bennett of Edom, Virginia, on his wife. When Mrs. Bennett's labor was long and unproductive, Dr. Bennett sent a messenger for Dr. Humphreys. After several attempts to apply forceps had failed, the two doctors felt that the pelvis was contracted and a normal delivery would be impossible. The known choice left open was craniotomy, with destruction of the baby; a radically innovative alternative, cesarean section, was suggested by Dr. Bennett. Dr. Humphreys advocated craniotomy. Dr. Bennett made history by not taking his advice and thus is now generally credited with the first successful (both mother and child surviving) cesarean section in North America. He also removed both of his wife's ovaries, predating by 17 years Dr. Ephraim McDowell's famous ovariectomy of 1809.<sup>1,4,6,11,13,15</sup>

Dr. Humphreys reputation as a teacher of medical students has not received the same attention as his consultation at Mrs. Bennett's bedside, yet with his teaching he made a significant contribution to medicine. He was already recognized as a preceptor of students when he moved to Staunton at the age of 30, and word of his teaching spread, as exemplified by William Henry Harrison of Charles City, son of Virginia's former Gov. Benjamin Harrison, who travelled to Staunton from the Tidewater area to study under Dr. Humphreys.<sup>11</sup> Little is known about the instruction the students received. Dr. Humphreys' "elaboratory," or workshop, was located at about the site of the present Staunton jail;<sup>12</sup> there human bodies were dissected. The names of only six of his students have come down to us.

**W**ILLIAM Wardlaw studied with Humphreys in Staunton for over two years. Then he evidently practiced in Charlottesville; at least when Thomas Jefferson was carrying on experiments in Jenner's method of vaccination at Monticello, (aided by Harvard's Benjamin Waterhouse), he called in Dr. Wardlaw, "a local physician," to make the inoculations. Thus Wardlaw became "the first physician to vaccinate successfully in Virginia."<sup>11</sup> Wardlaw moved to Tennessee, where he "became famous in the early medical history of that new state."<sup>13</sup>

William Wardlaw and another student, James McPheeters, unintentionally caused a lawsuit to be brought against their teacher. It seems they disinterred a body and, after dissecting it, placed it in a cave. Shortly thereafter a stranger disappeared from a local tavern and murder was suspected. Later, the dissected body was found in the cave and on the "crocus sack" containing it was Dr. Hum-

phreys' name.<sup>11</sup> Suit was brought against the physician, and although he was acquitted, he suffered from the reverberations of the ordeal.

Andrew Kean of Goochland County was another student. He became well-known as a physician in his home county and was chief surgeon of the Eighth Regiment of the Virginia Militia in the War of 1812.

After first studying under Dr. Andrew Leiper of Richmond, William Henry Harrison moved to Staunton to study under Dr. Humphreys,<sup>11</sup> then entered the University of Pennsylvania to continue his medical studies there. However, on his father's death in 1791 he gave up the study of medicine, entered the Army, and eventually became the ninth President of the United States.

Samuel Brown, a younger brother of Dr. Humphreys' wife, studied in Staunton for three years. He went on to the University of Edinburgh and then Aberdeen, where he received his medical degree.<sup>11</sup> Returning to this country, he practiced first in Lexington, Kentucky, and then in Mississippi. He was a pioneer in the use of vaccination; by 1802, four years after Jenner's discovery, he is said to have vaccinated over 500 people.<sup>16</sup>

In 1819 Dr. Brown returned to Lexington, where he taught the theory and practice of medicine at the Transylvania Medical School, the first medical school in the South and the first west of the Appalachians.<sup>17</sup>

Undoubtedly Dr. Humphreys' most famous student is Dr. Ephraim McDowell, who is often described as the founder of abdominal surgery.<sup>18</sup> McDowell was born in 1771 in what was then Augusta County but is now Rockbridge County and moved to Kentucky with his family as a boy. At 19, he began three years of study under Dr. Humphreys. He went on to the University of Edinburgh, returning to Staunton in the late summer of 1794; he must have heard of Dr. Bennett's successful cesarean section. The next year he returned to Kentucky to practice, performing in 1809 the ovariectomy that made him famous.<sup>19</sup>

**T**HE grave of Dr. Alexander Humphreys can be found in Trinity Churchyard, Staunton. There, on April 15, 1951, Dr. Richard P. Bell, Sr., delivered an address in dedication of a bronze tablet presented by the Augusta County Medical Society.<sup>13</sup>

When we consider what Dr. Humphreys and these other early physicians withstood and accomplished, with physical hardships and the lack of what for us are essentials—anesthesia, asepsis,

multiple instruments and drugs, how grateful and humble we should be. May we salute the physicians of the past, those who labored not only in Augusta County but throughout Virginia.

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The author is responsible for the accuracy of all statements and references. Acronyms and other abbreviations should be kept to a minimum; unless an acronym is widely known and used by all specialties, it should be fully explained in the text. Refer to pharmaceutical products by their generic names; brand names may follow in parentheses and should carry registered trademarks where applicable. All units of measure should appear in the metric system. References, typed in double-space, should be listed in the order of their citation in the text, not alphabetically. They should follow *VIRGINIA MEDICAL*'s typographic style for references; the typist should study this style as it appears in each issue.

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All manuscripts are subject to editorial changes. If extensive revision is deemed necessary, the author will receive for approval a draft of the article as edited.

There are many excellent handbooks of effective writing, among them *The Elements of Style*, by William Strunk, Jr., and E. B. White (MacMillan); *The Careful Writer: A Modern Guide to English Usage*, by Theodore M. Bernstein (Atheneum); and *How to Write and Publish a Scientific Paper*, by Robert A. Day (ISI Press).

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# OBITUARY

## **The Rev. Nathaniel Wooding, MD**

Nathaniel Henry Wooding, known to the Halifax community as both physician and priest, died September 13 at his home in Halifax at the age of 76. He practiced medicine at his River Bend Clinic on Halifax's Main Street and served as priest-in-charge of Emmanuel Episcopal Church in Halifax.

Born in West Virginia, Dr. Wooding moved to Halifax with his family when he was 2 years old. He attended Hampden-Sydney College before joining the United States Army, in which he served as a dentist's assistant in Panama. Later, in New York, he became a nurse and then entered the old Long Island College of Medicine in Brooklyn, graduating with his MD in 1943. He came back to Virginia for his training at the Medical College of Virginia, then rejoined the Army and served as a physician overseas during World War II. After the war he returned to Halifax and established his practice. In 1973 he entered Virginia Theological Seminary in Alexandria and was ordained there.

Dr. Wooding came to membership in The Medical Society of Virginia through the Halifax Medical Society and belonged also to the American Academy of Family physicians.

## **Carlton A. Michael, MD**

Dr. Carlton Alfred Michael, long a "country doctor" in Southwest Virginia, died July 20 at the Camelot Nursing Home in Salem at the age of 92. He suffered a stroke in 1978 and never fully recovered.

Born in Berwick, Pennsylvania, Dr. Michael attended public schools there, then Keystone Academy, Bucknell University, and Hahnemann Medical College, where he also completed his training. In 1921 he began practicing in Austinville, serving that community and the surrounding Wythe and Carroll counties for 38 years. He was also company doctor for the Bertha Mineral Company.

When he retired in 1959, he moved to Blacksburg. There he became curator of the Geology Museum at Virginia Polytechnic Institute and State University, to which over the years he had contrib-

uted an extensive collection of gems and minerals.

He held life memberships in the Southside Medical Society, The Medical Society of Virginia, the American Medical Association, the American College of Surgeons, and the Archeological Society of Virginia.

## **Memoir of A. G. Johnson 1925-1985**

*By H. Alan Bigley, Jr., MD*

The Petersburg medical community lost a most highly regarded colleague in the passing of Dr. Alfred G. Johnson on August 12, 1985. Well known in the Southside Virginia area for his affable personality, kind, sincere manner, and surgical skills, Dr. Johnson had practiced general surgery in Petersburg for 29 years.

A native of Charleston, South Carolina, Dr. Johnson was a graduate of Avery Institute, Charleston, South Carolina; Morehouse College, Atlanta, Georgia; and the Howard University School of Medicine, Washington, DC. He served his internship and first year of residency at Homer G. Phillips Hospital, St. Louis, Missouri, and completed his general surgical training at the Veterans Administration Hospital in Dayton, Ohio. He served in the United States Air Force for two years at Wright-Patterson Air Force Base in Dayton, Ohio.

Dr. Johnson was the first black general surgeon on the staff of Petersburg General Hospital. His distinguished career as a practicing surgeon included two terms as chief of surgery at the hospital, and election to fellowship in the American College of Surgeons in 1964. He was active in professional organizations, among which were the Petersburg Medical Faculty, Southside Virginia Medical Society, The Medical Society of Virginia, and the American Medical Association.

During the past year, Dr. Johnson served on the consulting staff at Petersburg General Hospital. He is survived by a daughter, Dr. Karen Y. Johnson of Cincinnati, Ohio, and his wife, Dr. Margaret Crowder Johnson, an internal medicine specialist, also practicing in Petersburg.

Dr. Johnson will be greatly missed by his patients, family, and professional colleagues in Petersburg and Southside Virginia, all of whom mourn his passing.

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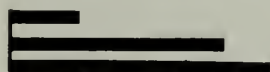
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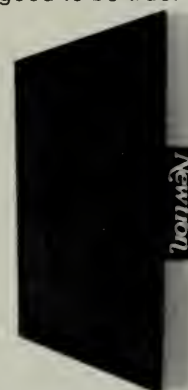
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# WHO'S WHO

FOUR PAST PRESIDENTS of the Norfolk Academy of Medicine opted to retire this past summer after racking up a combined total of 171 years of practice in the Tidewater city. They are **Dr. Charles E. Davis, Jr.**, **Dr. John Franklin**, **Dr. Gervas S. Taylor, Jr.**, and **Dr. W. Wickham Taylor**.

"When four men with that much experience leave the profession, it's something to take note of," said **Dr. Harold M. Horden**, current president, at the Academy's annual dinner in June, and note was thereupon taken in a ceremony led by **Dr. Russell D. Evett**, who gave a tribute to each of the four.

Dr. Davis opened his practice of general surgery in Norfolk in 1948 and has been president not only of the Academy but of The Medical Society of Virginia, the Virginia Surgical Society, the DePaul Hospital medical staff, and the Medical Alumni Association of his alma mater, the University of Virginia. Late last year he turned in his resignation as an Associate Editor of *VIRGINIA MEDICAL*.

Dr. Franklin, an internist/cardiologist in Norfolk since 1947, was an early advocate of the establishment of Eastern Virginia Medical School; he served for five years on the initial planning council, for seven years as a commissioner of the Norfolk Area Medical Center Authority, and on numerous other bodies that set the school's directions. The Norfolk Public Health Department values Dr. Franklin's long service on its advisory committee, and early this year his associates at the Norfolk Diagnostic Clinic established in his honor the John Franklin Medical Foundation.

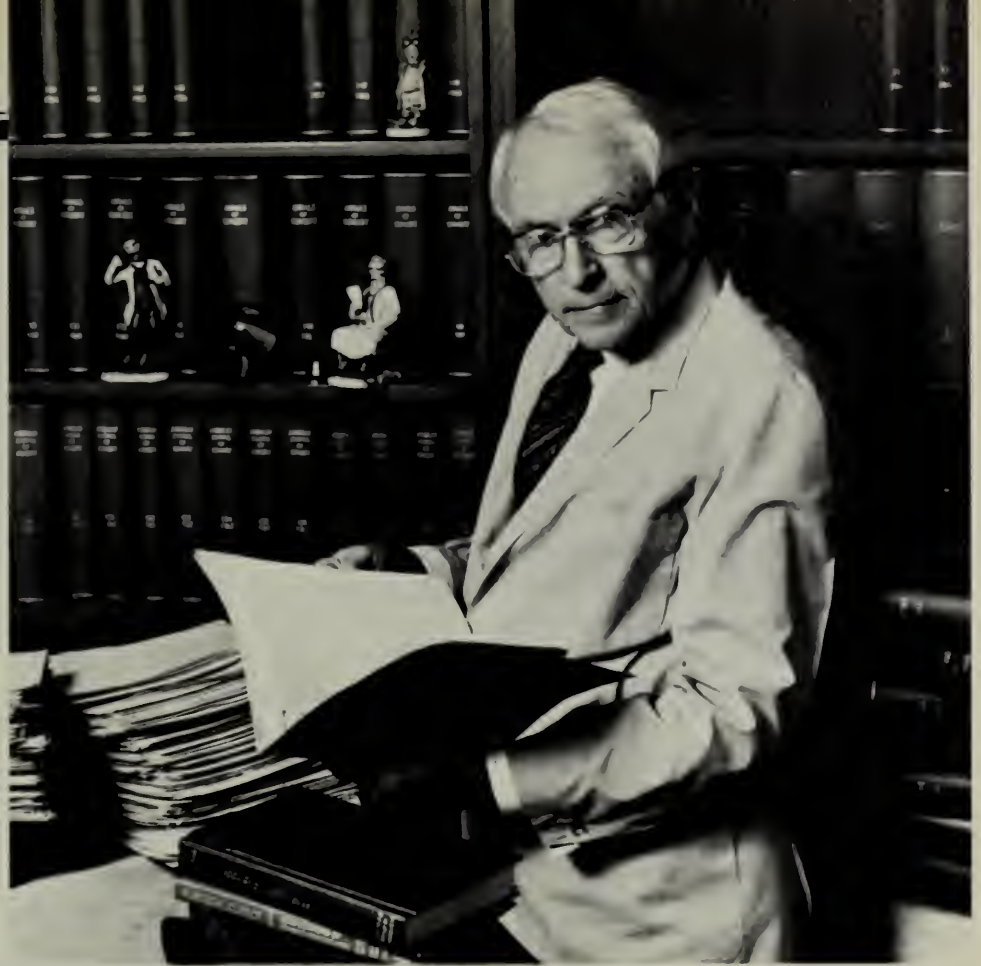
Dr. Gervas Taylor has practiced orthopedic surgery in Norfolk since 1954. Numerous athletic teams in the Tidewater area are in his debt for services as team physician, and in 1972 the Norfolk Sports Club honored him with its Man of the Year Award. Like Dr. Franklin, Gervas Taylor is a veteran of the Norfolk Health Department's advisory committee. For The Medical Society of Virginia he was a longtime member of the Legislative Committee, and he energetically supports VaMPAC.

After graduating from the Johns Hopkins School of Medicine and completing his training there, Dr. W. Wickham Taylor returned to his hometown in Norfolk in 1941 to establish his practice in ophthalmology. "Wick" Taylor is not related to Dr. Gervas Taylor, but he is a cousin of another past president of the Norfolk Academy, **Dr. Harry B. Taylor, Jr.**, with whom he has been associated in practice for the past two years. "Wick" Taylor is an accomplished horticulturist specializing in camellias and an ardent bird-watcher; the latter pastime he pursues primarily at the family summer place on Ahmic Lake in Ontario, Canada.

After more than 30 years of taking care of Franklin Countians, **Dr. William C. Hughes**, Boones Mill, announced his retirement late in July, but he isn't sure the decision will stick.

"I'm hoping it will work out," he told reporter Linda Willis of the *Franklin News Post*, "but if it doesn't, I may go into part-time practice somewhere." He's putting retirement to the test at his Smith

Photo credits in this section: Dr. Davis by Larry Branham for *VIRGINIA MEDICAL*; Dr. Gervas Taylor, Marsha Polier for *VIRGINIA MEDICAL*; Dr. Franklin, Willys M. Monroe; Dr. Clark, *Progress-Index*; Dr. Stokes, *Virginia Gazette*; Dr. Gilmer, Russell County Medical Center; Dr. Haas, Radford Community Hospital; Dr. Hughes, Roanoke Memorial Hospitals.



In his Medical Tower office, Dr. Davis packs up 40 years of practice.

Right, Dr. Franklin greets well-wishers at a reception in his honor.



Below, at a VaMPAC party Dr. Gervas Taylor talks to Sen. John W. Warner.



Dr. Wickham Taylor on the trail of birds near Lake Ahmic, Canada.

Mountain Lake Home, he told his interviewer, where he hopes gardening and assorted household chores will keep him occupied.

Born in Virginia's Campbell County 67 years ago, Dr. Hughes took his medical degree at the University of Cincinnati College of Medicine, then trained at the Medical College of Virginia Hospitals. He first practiced with the Wolfe Medical Group in Rocky Mount, then in 1959 began a one-man practice at the Boones Mill Medical Clinic. He is a long-time member of the Franklin County Medical Society and The Medical Society of Virginia.

**Dr. Hugh G. Stokes, Jr.**, resigned early this year as medical director of Eastern State Hospital, telling a newspaper reporter that he had only one objective in mind—to be bored.

"I have been frustrated, mad, confused and sometimes even elated, but I haven't been bored in years," he told Claire Fortier of the *Virginia Gazette*.

After graduation from Emory University School of Medicine, Dr. Stokes took his training in surgery at the Medical College of Virginia.

In 1946, after he had married and his wife became pregnant, he left a \$10-a-month surgical residency at MCV and hung out his shingle in Williamsburg.

After 22 years of performing surgery and delivering babies, he gave up both because of increasing specialization and malpractice litigation and went into general practice. That "wasn't much fun," he told the interviewer, so at age 52 he turned to psychiatry, serving his residency at Eastern State and staying put there after it was completed.

Eastern State has been for him something of a mission, he observed. "I grew up in a religious family and always had the feeling that I should have been a medical missionary. After I came to Eastern State, that urge went away."

**Dr. Giles Q. Gilmer**, 67, closed his office in Lebanon this past summer and embarked on a new career: He joined the Virginia Department of Health as a clinician serving Russell, Tazewell, Buchanan and Dickenson Counties. It was the end of a 38-year family practice, and a crowd of patients came to a reception in his honor to ex-

press their love and respect. Fellow physicians and staff of the Russell County Medical Center came, too, and they bore gifts: an engraved pewter plate and cups, and a check for \$500 for the Sue Gilmer Scholarship Fund. The fund, which goes to students pursuing nursing or an allied health career at Southwest Virginia Community College, memorializes Dr. Gilmer's late first wife.

Born in Lebanon, Dr. Gilmer graduated from Emory and Henry College and the University of Virginia School of Medicine. After service in the Navy, he returned to Lebanon to establish his practice and his family. One of his four children followed him in medicine; he is **Dr. Robert D. Gilmer**, an anesthesiologist in Abingdon.

In 1970-1971 Dr. Gilmer was president of the Southwestern Virginia Medical Society.

After practicing medicine in Chester for 46 years, **Dr. Louise Leland Clark** has retired. Her one-room office, attached to a large handsome home on Richmond Street in Chester, had seen patients come and go since 1942, after she graduated from the Medical Col-



**Dr. Stokes**



**Dr. Hughes**

lege of Virginia and settled down in Chester with Bruce Clark, a Richmond newspaper reporter. He was killed in an automobile accident ten years later and she lost a son in another car accident, but Dr. Clark stayed in Chester because of the closeness of her friends and her church there. She has another son, Donald B. Clark, who is a commander in the Navy.

A native of New York, Dr. Clark received her undergraduate degree in physical education from the University of Minnesota, then taught for three years before getting her masters degree at New York University. Her specialty, physical therapy, led her to medicine, and she took both doctorate (Class of M-39) and internship at MCV.

At 78, it was not her age but the skyrocketing cost of malpractice insurance and the overwhelming burden of paperwork that finally caused her to retire, Dr. Clark told Larry Minkoff, reporter for the Petersburg *Progress-Index*. Retirement was not something she wanted to do but was forced into doing.

At a meeting of the Chesterfield County Board of Supervisors, Dr. Clark was presented with a commendation for her untiring services

to several generations of families in and around the southern portion of Chesterfield County, and Gov. Charles S. Robb sent a certificate of recognition.

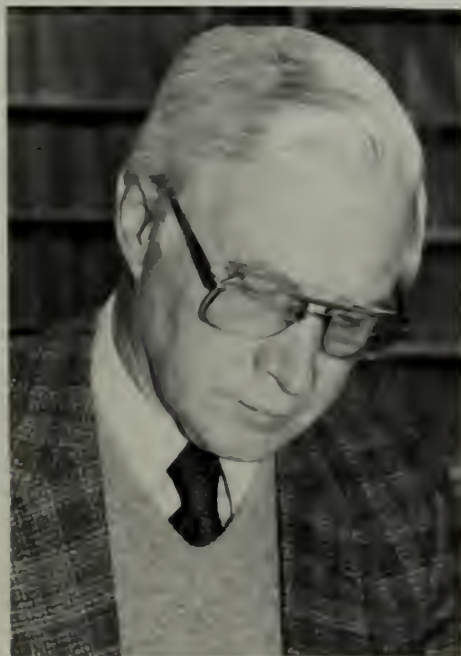
In Radford, **Dr. Theron H. Haas** closed his practice of obstetrics/gynecology in July and shortly thereafter he and his wife Jean took off on a tour of the Scandinavian countries, the first of many trips they look forward to now that "T" is retired and their five children are on their own.

Born in Toledo, Ohio, Dr. Haas graduated from the University of Michigan at Ann Arbor and went on to its School of Medicine for his MD, Class of 1945, then trained in Washington, DC. In his adopted community of Radford he quickly became identified with public service; he was appointed to fill out a term on the city council, later was elected on his own and served as vice mayor, taking over the mayoralty for a time when the mayor died. For Radford Rotarians Dr. Haas has served in a number of offices, including the presidency, and he is a pillar of the Radford Presbyterian Church.

The Southwestern Virginia Med-

ical Society recognized Dr. Haas' retirement by giving him honorary membership, and for his 34 years of active medical staff status, including a term as president, the board and medical staff of Radford Community Hospital honored him at their May meeting.

An oil portrait of **Dr. Lemuel E. Mayo, Jr.**, Portsmouth, was unveiled at Portsmouth General Hospital in ceremonies early in September. It was commissioned by the hospital's surgical department, of which Dr. Mayo has been chief. He has also headed up the Portsmouth Academy of Medicine as its president, and when he retired last year at age 72, the Academy gave a reception in his honor. Dr. Mayo was born and reared in Portsmouth and is a graduate of the University of Virginia School of Medicine.



Dr. Haas



Dr. Gilmer



Dr. Clark

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# MEDIBYTES

## NEWS FROM VA MED'S COMPUTER ROOM

### UNIFICATION CREATES NEW STATE/NATIONAL PARTNERSHIP

By a majority exemplifying the unity they were after, delegates to The Medical Society of Virginia's annual meeting last month voted to adopt unified membership with the American Medical Association.

Thus MSV members forged a state and national partnership aimed at dealing more forcefully with a government bent on multiplying its regulatory powers, an economic climate threatening quality of care, and a legal system rampaging with medical malpractice suits.

In Reference Committee Three and on the House floor, the pressing need for professional unity now was spelled out by those who urged adoption. Few spoke in opposition; most of those who did endorsed unification but felt the issue should be referred to the membership for a vote. The House resoundingly rejected a motion so to refer, and shortly thereafter the 227 delegates in the hall rose almost en masse to vote Aye for unification. Only a scattering of delegates, perhaps 20, stood to dissent.

How will the new partnership work? As of November 9, 1985, the day the delegates voted, The Medical Society of Virginia's Articles of Incorporation were amended to read that "any active member of the Society who is not exempt from paying dues to the Society must also be a member of the American Medical Association." (At last count, 3,407 of the 6,079 active members of The Medical Society of Virginia belonged also to the AMA.)

The Society is to collect both MSV and AMA dues. Billings for 1986 show MSV dues of \$195, no change from 1985. As a unification bonus, the billing's AMA entry shows dues @ \$330 discounted by 10% to \$297. (An AMA dues hike to \$375 goes into effect in 1986, but for members of newly unified societies the raise is postponed for a year, another bonus.)

The new MSV/AMA unification works both ways, i.e., an estimated 443 Virginia physicians who belong to the AMA but not to the Society must now become MSV members in order to stay on the AMA roster.

As for local/state unity, MSV membership has always been contingent on membership in the physician's local, or component, medical society; indeed, some component societies require that their members belong to the state Society.

MSV/AMA unification was proposed once before, in 1975, but on that occasion the House of Delegates rejected it. Dr. Richard E. Palmer, Alexandria, who became AMA President in 1976, was at the meeting at the Homestead this year, listening intently to the debate. Were the pros and cons different from those in 1965? a reporter asked him. "The reasons for unification are far more compelling today," he answered.

Now another Virginian, Dr. William S. Hotchkiss, is a candidate for the AMA presidency (Va Med 1985;112:616), with credentials that personify unification: He has been President of both the Norfolk Academy of Medicine and The Medical Society of Virginia and is now Chairman of the AMA's Board of Trustees.

In creating the new AMA/MSV alliance, the Society's delegates made Virginia the fourth state to adopt unified membership this year, following the Kansas Medical Society and the Utah and Mississippi Medical Associations. Previously, Illinois and Oklahoma were the only unified states.

#### **AMA DELEGATION AUGMENTED, CARAVATI INSTALLED, FIELDS ELECTED**

With the passage of unified membership, The Medical Society of Virginia gained four more members for its AMA delegation, and the House lost no time in filling the new slots. Elected as the two new delegates were Dr. H. C. Alexander III, Roanoke, and Dr. Percy Wootton, Richmond, both of whom had previously been alternate delegates. To fill their shoes and the two new slots in the alternate delegate column, these four were chosen: Dr. Leon I. Block, Fairfax; Dr. William S. Burton, Nassawadox; Dr. Russell D. Evett, Norfolk, and Dr. Harry C. Kuykendall, Alexandria.

As MSV President 1984-1985, Dr. Kuykendall was the meeting's presiding officer, and it was he who hung the seal of office about the neck of Dr. Charles M. Caravati, Jr., the new President. (See pages 790 and 792 of this issue. In the January issue, Dr. Kuykendall's Presidential Address will be published.)

To Dr. Richard L. Fields, Fairfax, went the delegates' unanimous vote for President Elect. For five years Dr. Fields has been Speaker of the House; the delegates moved Dr. William H. Barney, Lynchburg, up to that post, while Dr. George E. Broman, Culpeper, was named Vice Speaker, and these were named to the triple vice presidency: Dr. Glenn B. Updike, Jr., Danville; Dr. J. Thomas Hulvey, Abingdon; and Dr. Donald S. Thorn, Fairfax.

Three new councilors were elected: Dr. William H. Sipe, Newport News; Dr. Gerald C. Burnett, South Boston, and Dr. James L. Patterson, Jr., Pulaski.

Elected as new vice councilors were Dr. Louis D. Parham, Jr., Hampton; Dr. Edwin J. Harvie, Danville; Dr. Ira J. Green, Alexandria; Dr. John Boniface, Jr.,

(continued on page 774)



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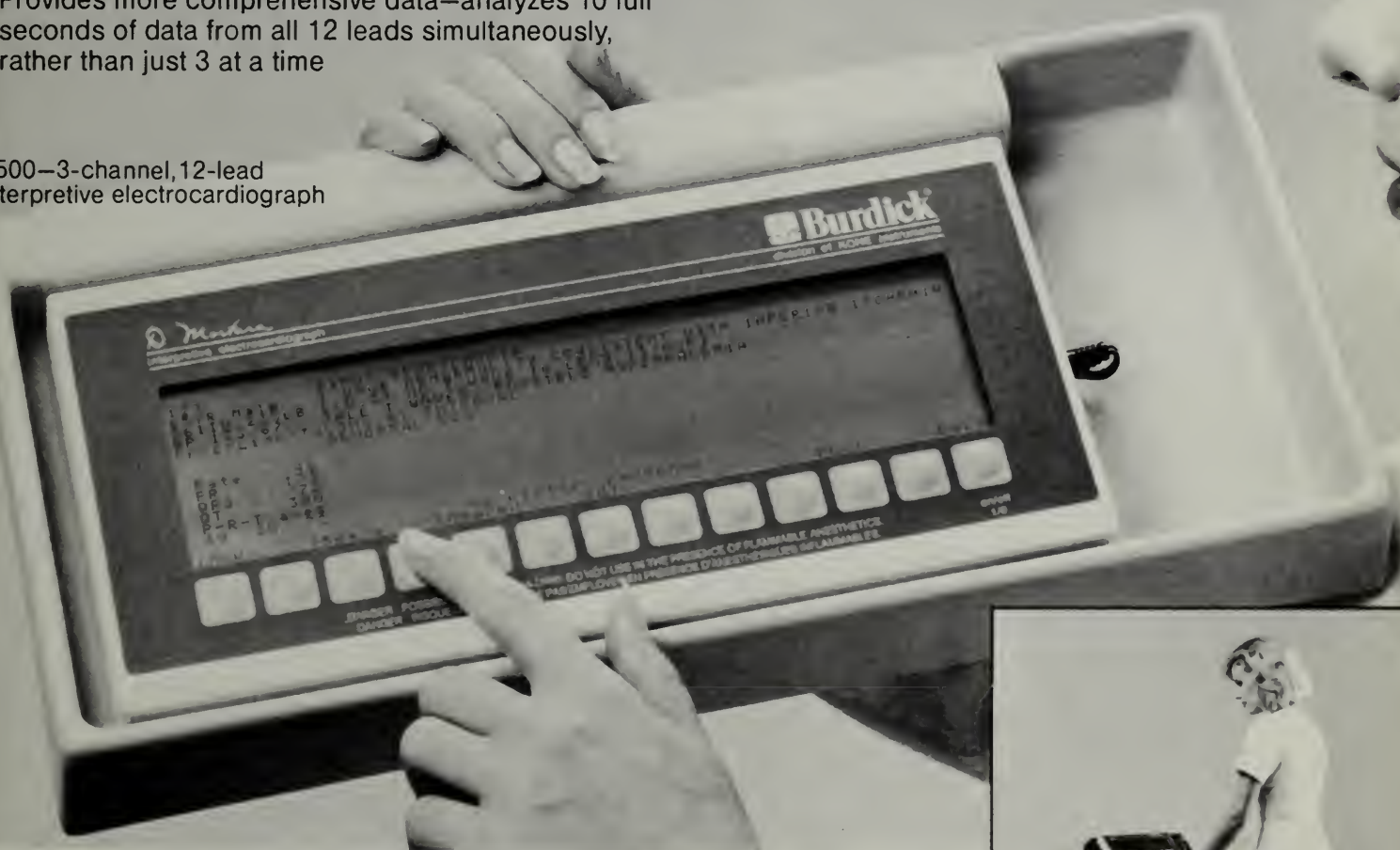


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Galax; and Dr. Barbara A. Mella, Fairfax. Dr. Mella is believed to be the first female member of Council; she is a past president of the Fairfax Medical Society and a present member of the State Board of Medicine.

Also tapped for recognition at the meeting was Dr. Mason C. Andrews, Norfolk, who received from Dr. Kuykendall the Physicians Community Service Award. More on Dr. Andrews in the January issue.

## MAMMOGRAPHY, PEER REVIEW, DISCIPLINE PROMPT ACTION

Although unified membership was their most riveting subject, the delegates acted on many other matters of concern. Notably, they

- asked The Medical Society of Virginia to establish a task force to study coverage of diagnostic screening for breast cancer. At present, the House heard, third party payment for mammography may be specified only after a breast mass is found or when signs or symptoms suggest malignancy, which ignores women at risk;

- pledged the Society to work with health agencies and all citizens of Virginia to create by the year 2000, a tobacco-free environment, a step beyond the "smoke-free" designation of the original resolution. Also adopted was a resolution calling for the prohibition of sales of tobacco in hospitals;

- requested that The Medical Society of Virginia develop appropriate preadmission certification standards with a view to legislating their application to all review conducted in Virginia;

- adopted all 21 proposals in the report of the MSV committee that has been studying the way Virginia physicians are disciplined, including these changes in the State Board of Medicine: 1) Add two citizen members to the board. 2) Increase compulsory reporting of disciplinary matters, without penalty to the reporter. 3) Extend to one year the time that must pass before a physician whose license has been revoked can reapply. 4) Increase licensing fees. 5) Hire a licensed physician as the board's executive director.

More on the delegates' actions, with a portfolio of pictures, in the January issue. --A.G.

**FEE FREEZE EXTENDED**--As this issue neared press time, President Reagan signed into law a bill extending the freeze on Medicare reimbursements for all physicians and hospitals through December 14. Congress, meantime, continued to wrestle with the budget, on which hangs both par and non-par reimbursement levels through September 1986.

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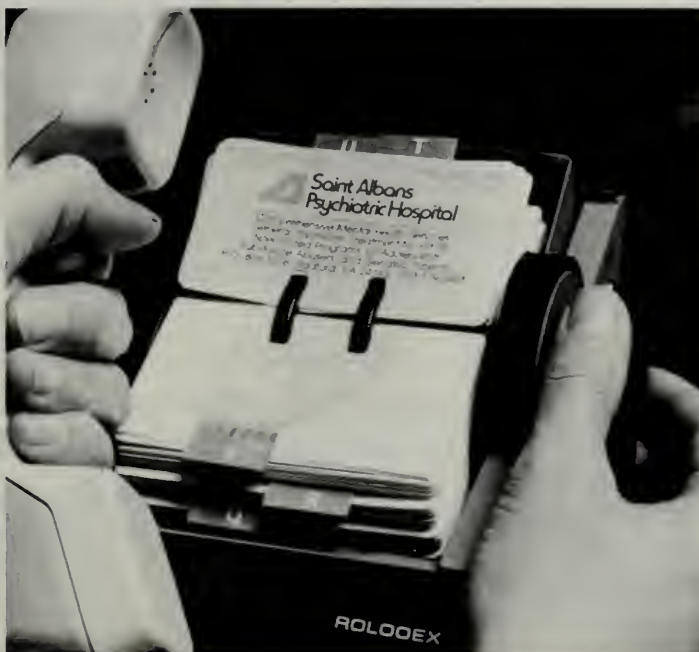
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# Flow Cytometry of Urinary Bladder Washings

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and Myron R. Melamed, MD, *New York, New York*

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A new type of microscopy is replacing conventional cytology to assess the objective and quantitative state of the bladder epithelium. It is flow cytometry, in which cells suspended in bladder washings are examined by a beam of light. The authors describe technique, instrumentation and results.

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**T**HE DIAGNOSIS of carcinoma of the urinary bladder is primarily made on the assessment of nuclear abnormalities seen on light-microscopic examination of exfoliated bladder epithelial cells. These abnormalities result from an increase in the DNA content seen with cancer cells, which in turn causes nuclear hyperchromasia and enlargement, and from alterations in chromatin structure that cause changes in the staining texture and configuration of the nucleus. The routine light microscopic (cytologic) diagnosis of carcinoma is a subjective interpretation of these abnormalities in which the accuracy depends upon the individual cytologist's experience, expertise and interest. The flow cytometry diagnosis of carcinoma, on the other hand, is

based directly on the objective measurements of the DNA content of the exfoliated epithelium and possibly other features, including RNA measurements, nuclear chromatin conformation, or the presence of different cellular antigens. Using DNA measurements alone, flow cytometry has achieved diagnostic levels at least as accurate as conventional cytology, particularly for carcinoma in situ.

## Instrumentation

Flow cytometry is a relatively new type of microscopy in which cells in suspension are examined as they flow in single file through a narrowly focused beam of light. The particular constituents or properties of the cells to be measured determine the light source and stain to be used. A diagrammatic representation of a flow cytometer is shown in Figure 1.

For detection and monitoring of bladder cancer, bladder epithelial cells are collected and prepared as outlined below and stained for DNA and RNA content with the metachromatic fluorescent dye acridine orange. As cells flow in single file fashion

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through the narrow quartz channel of the flow cytometer, they intersect the focused beam of blue light from an argon laser at a wavelength (488 nm) close to the excitation peak of acridine orange dye. As each stained cell intersects the beam of light, a fluorescent flash is emitted, collected and separated optically into green (DNA) and red (RNA) components. The amount of fluorescence is measured independently by separate filtered photomultipliers and recorded on a computer. Up to 200 cells per second are measured for a total of 5,000 cells in less than a minute.

### Specimen Collection/Preparation

Abundant, well-preserved epithelial cells, ideal for flow cytometry, are obtained by bladder irrigation. From outpatients, specimens are obtained through a urethral catheter by irrigating with four or five pulses of 50cc saline using a Toomey syringe. If a patient is undergoing simultaneous cystoscopy, the irrigation is done through the cystoscope. For correlation with conventional cytology, either the urine present in the bladder or another irrigation specimen should be obtained. After collection the specimen may be refrigerated for up to 24 hours before processing or fixed in 95% ethanol for staining at a later date.

The sample preparation and two-step acridine orange staining techniques have been previously described in detail.<sup>1,2</sup> The cell samples are concentrated by centrifugation, resuspended in Hank's balanced salt solution to a concentration of  $10^6$  cells/cc and sieved through a 54- $\mu$ m nylon mesh filter to remove tissue fragments and cell clusters. Although there are a number of suitable fluorescent DNA binding dyes that can be used for flow cytometry of bladder specimens, perhaps the largest experience has been with acridine orange. Under the conditions described by Darzynkiewicz, Traganos and associates,<sup>1-3</sup> the two-step acridine orange technique differentially stains DNA and RNA. The dye intercalates into the DNA helix in monomeric form and fluoresces green (515-575 nm) in blue light; RNA is converted into its single-stranded form and interacts with the dye to form micelles or aggregates that fluoresce red (600-640 nm). The fluorescent emission at the two different wavelengths is separated optically, quantified by separate photomultiplier tubes and recorded by computer for each cell. Peripheral blood lymphocytes are used to calibrate the instrument and act as a control. Usually 5,000 cells are measured and later analyzed by interactive computer programs.

The measurements may be displayed in various

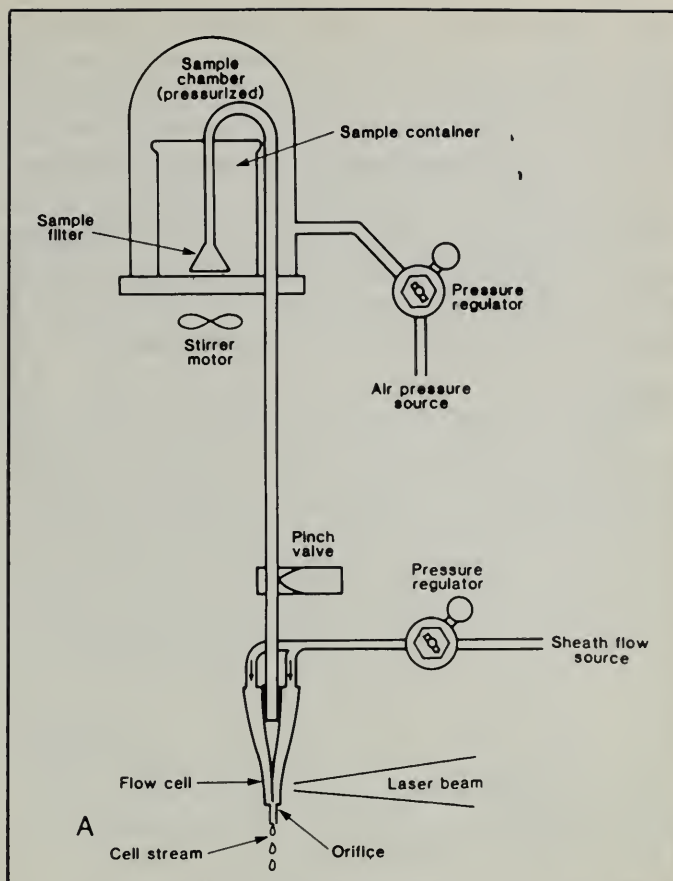


Fig. 1A. Suspension of bladder epithelial cells stained with fluorescent dye acridine orange is placed in sample container, then forced under pressure into narrow stream of cells through flow cell. Within flow cell (or flow channel), cell stream is narrowed into single file of cells and centered at focus of argon ion laser beam by laminar sheath of saline or water. Water sheath keeps cells from touching channel wall and prevents its being blocked. Emerging from channel, cell stream breaks into droplets that can be charged and deflected electrostatically to sort subpopulations.

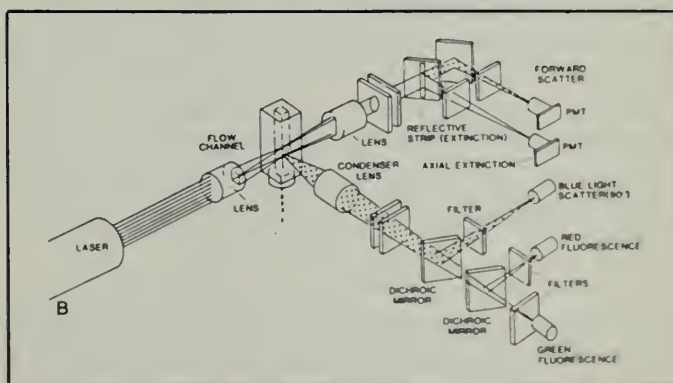


Fig. 1B. Flow channel is rectangular, with optically flat surfaces. As each cell flows through narrowly focused laser light, it emits fluorescence flash that is collected at 90 degrees; red and green components are separated by dichroic mirrors and optical filters, measured by separate photomultipliers and recorded by computer. Blue laser light absorbed by the cell (extinction) or scattered in forward direction or at 90° gives information about cell size and granularity and can be measured simultaneously.

ways; however, if a single feature is of interest, e.g., DNA content, the distribution is usually shown as a histogram (Fig. 2). If two features are important, then the measurements may be displayed as a scattergram of points in two-dimensional space in which each point indicates the values of the two features for each cell located on an X and Y axis, or a pseudo-three-dimensional figure can be constructed in which the number of cells at a given point is displayed on the two axes by height.

## Results

Normal bladder epithelium is diploid with a few polyploid or multinucleated cells. Less than 10% of the epithelial cells should be in proliferative phase (S+G2+M) to be considered normal (Fig. 2A). In patients with cystitis or bladder inflammation there is an increase in DNA synthesis frequently manifested by a "tail" of cells off the diploid peak and a more prominent G2 or tetraploid population (Fig. 2B). The percent of proliferative phase cells should be less than 15% in most cases with inflammatory disease. Values greater than 15% should be considered suspicious of carcinoma. A firm diagnosis of bladder cancer requires the identification of an aneuploid population of epithelial cells, that is, a population of cells with abnormal (usually increased) DNA content (Fig. 2C). In some cases two or more aneuploid cell populations may be seen.

Since 1980, bladder washings from several series of patients have been studied by flow cytometry.<sup>4-13</sup> The best diagnostic results have been reported by Klein and associates, in which 97% (69 of 71) of the cases of flat carcinoma in situ were identified. Invasive carcinoma was positive by flow cytometry in 92% (48 of 52 patients) and noninvasive papillary carcinomas were positive in 86% (30 of 35 patients).<sup>7,8</sup> These results are comparable to conventional cytology. Those cases that were false-negative either were focal lesions that did not shed enough cells to be recognized or were ulcerating, invasive carcinomas surfaced by an inflammatory exudate.

Devonec and associates compared flow cytometry with conventional cytology in 84 urologic outpatients who had low-stage bladder tumors and found flow cytometry to be more sensitive than conventional cytology.<sup>5</sup> This was confirmed in a followup study by Klein and associates.<sup>9</sup> In another study Klein and associates examined a series of urologic patients without bladder carcinoma and reported positive diagnoses in two of 100 patients (2% false-positive).<sup>10</sup> Both of these patients had bladder calculi with squamous metaplasia and severe inflammation, and in both cases the positive

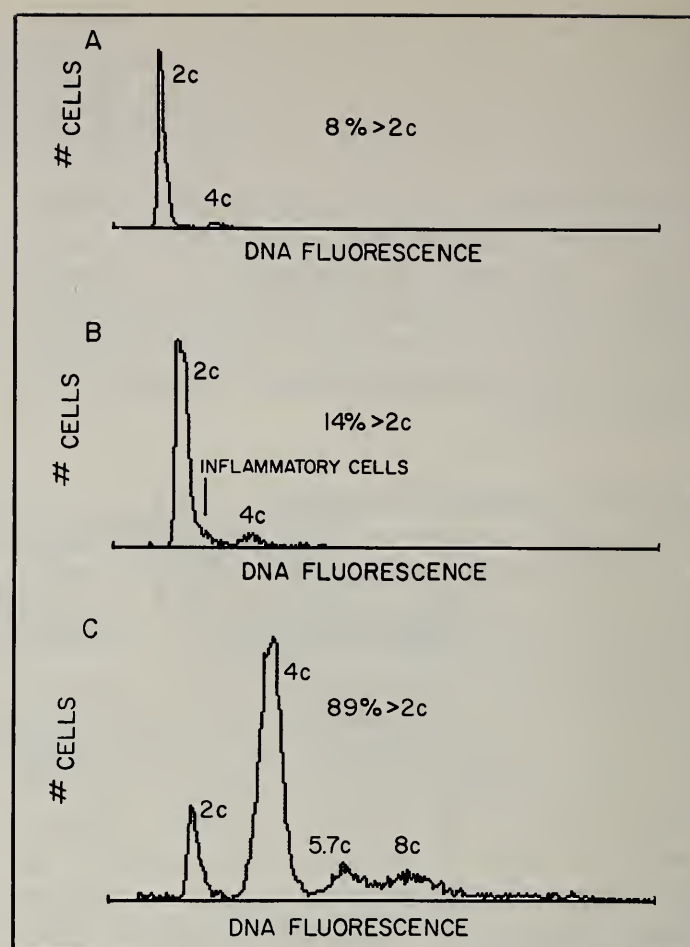


Fig. 2. A: DNA histogram of a bladder washing from normal bladder. Large diploid peak of cells (2c) represents normal bladder epithelium. Small population of cells at 4c are dividing bladder epithelial cells. Total number of hyperdiploid cells is 8%. B: DNA histogram of bladder washing from patient with severe cystitis. Tail of inflammatory cells is seen off of diploid population of cells with prominent tetraploid population at 4c. Fourteen percent of the cells are hyperdiploid, classifying this study as suspicious. C: DNA histogram of bladder washing from patient with invasive Grade III transitional cell carcinoma. There is small population of normal diploid epithelial cells (2c), tetraploid tumor stemline (4c) with dividing tumor cells (8c) and aneuploid stemline of cells (5.7c). Eighty-nine percent of the cells are hyperdiploid.

diagnosis was based on an increased population of "proliferative" cells. We have not seen any patient with an aneuploid cell population who did not have carcinoma present.

Cytologically benign papillomas may be defined as tumors composed of diploid cells, and bladder irrigation specimens from patients with these neoplasms would not be expected to have aneuploid cells. This is consistent with the orderly and uniform appearance of the tumor cells by light microscopy. Approximately 12% of the cases studied by us, however, have had an aneuploid cell line.<sup>11</sup> We believe either the cells were measured from areas of

the tumor not seen on histologic sampling or from other areas in the bladder with cystoscopically unrecognized carcinoma in situ. The papillomas presumably are metabolically more active and proliferating more rapidly than normal epithelium.<sup>14</sup> Thus about one-third of cases have an increase in the number of "proliferative" cells, and there is an increased amount of RNA in 83% (40 of 43) of the cases.<sup>11</sup>

Flow cytometry has also been used to compare specimens in sequential studies over time, to document changes during the course of disease or following therapy. The sequential studies reported to date by Klein and associates<sup>9,12,13</sup> have included patients with histories of low-stage bladder tumors treated by local resection alone, patients treated by irradiation and by BCG intravesical immunotherapy. In these studies the flow cytometry results have correlated well with the clinical response or nonresponse of the patients' tumor.

### Discussion

Automated flow cytometry of bladder barbotage specimens using the two-step acridine orange staining technique provides a rapid, objective, quantitative method of measuring specific parameters of exfoliated epithelial cells. Using DNA measurements alone, flow cytometry of bladder washings has proven to be a sensitive and specific method of identifying carcinoma, particularly carcinoma in situ, and monitoring the effects of treatment on the bladder mucosa. The false-positive rate is 2% in a population of patients with urologic disease, and the false-negative rate for carcinoma is 7%.<sup>7</sup>

Because flow cytometry is a relatively new technique there are some technical problems that still need resolution. The instrumentation and the need for engineering assistance to maintain a computer data analysis system and the flow cytometer itself make this technology expensive and require multidisciplinary personnel. With improved instrument reliability and standardization of data analysis systems these costs should decrease. The second major unresolved problem is the requirement for irrigation specimens rather than voided urine specimens. For the present, at least, screening should be directed toward high risk populations only, that is industrial workers exposed to a known carcinogen or patients with unexplained urologic symptoms or microhematuria or a history of conservatively treated tumors.

These individuals should have examination of catheterized urine and may require more extensive urologic examination. At the time of catheterization

an irrigation specimen for flow cytometry should be obtained. The advantages of flow cytometry over conventional cytology are its reproducibility without requiring subjective interpretation and the quantitative nature of results, which may be compared in tabular or graphic form in sequential examinations. The results do not depend upon the expertise and interest of a cytopathologist, and the service can be offered to patients in areas where accurate, conventional cytology may not be available. Alcohol-fixed specimens may be mailed to flow cytometry centers for processing and interpretation.

We believe that in time flow cytometry will be an acceptable, routine clinical test not only to identify and quantify the presence of malignant cells but also to provide vital information about growth potential, biologic behavior and treatment effects that is not obtainable in another way.

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*concluded on page 789*

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# Bacteriuria Screening by Leukocyte Esterase Nitrite Strip Plus Gram Stain

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Conventional urine culture can be replaced by Chemstrip™ LN but at a sacrifice in sensitivity and reliability. By adding a Gram stain, however, screening for negative bacteriuria becomes faster, less costly, and more effective.

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URINE is the specimen type cultured with greatest frequency by the clinical microbiology laboratory with a high incidence of negative results. Our laboratory in a 650-bed community teaching hospital accepts 30-50 urine specimens a day for culture, approximately 80% of which yield negative results.

Increasing demand for rapid screening of bacteriuria has prompted use of semiautomated methods. Simple and inexpensive rapid methods have also been evaluated, including Gram stain, which requires experience and gives variable results.<sup>1-3</sup> Most recently, strips detecting leukocyte esterase (LE) and nitrite (LN) have been introduced.<sup>4-8</sup> Major disadvantages are failure to detect gram-positive organisms and colony-forming units less than  $10^5$ /mL. High false rates, both negative and positive, especially among adult females, are additional drawbacks.

The purpose of this study was to decrease the number of false-positive and false-negative results obtained with the Chemstrip™ LN by incorporation

This paper was presented in part at the fall meeting of the American Society for Clinical Pathology on October 30, 1984, in New Orleans.

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of Gram-stain interpretation for a reliable, rapid and cost-effective method of screening for bacteriuria.

## Materials and Methods

**Specimens:** A total of 1,000 midstream and clean-catch urines transported without preservatives and chosen randomly from inpatient, outpatient and emergency services was processed. Specimens with intense pigmentation or hematuria were excluded from this study. Approximately 80% of the total specimens represented adult females.

**Cultures:** Upon arrival in the laboratory, specimens were cultured within one hour by inoculation of 0.001 mL of urine onto each half of a biplate of colistin-nalidixic acid agar with 5% sheep blood and eosin methylene blue agar. Specimens were then held at 4°C for up to six hours to allow Chemstrip LN testing and Gram stains to be performed in batches. Culture plates were incubated at 35°C for 18-24 hours, then examined for colony count and identification of microorganisms. Significant bacteriuria was defined as follows: 1)  $\geq 10^4$  but  $\leq 10^5$  CFU/mL of a single pathogen; 2)  $\geq 10^5$  CFU/mL of one or two pathogens; 3)  $\geq 10^5$  CFU/mL of *Staphylococcus epidermidis*. Regardless of CFU, growth of the following organisms was considered insignificant and the culture was interpreted as negative: *Gardnerella*, *Corynebacterium*, *Lactobacillus*, viridans group of *Streptococcus* and nonhemolytic streptococci other than groups B and D. Also, urines producing  $\geq 10^5$  CFU/mL of three or more organisms were considered negative for significant bacteriuria.

**Chemstrip LN:** Each urine was dipped briefly (one second) with a Chemstrip LN test strip to a depth that insured immersion of the chemically-impregnated patches on the strip. The edge of the strip was drawn along the rim of the specimen container to remove excess urine. After the appropriate time (one-half minute for nitrite and two minutes for LE), the strips were read by visual comparison with the color scale printed on the label of the Chemstrip LN vial. A positive test for significant bacteriuria by the strip was defined as detecting both LE and nitrite, LE alone or nitrite alone. A negative test for significant bacteriuria detected neither LE or nitrite.

**Gram stain:** A small drop of each uncentrifuged urine was placed with a culture loop onto one circle on a glass slide commercially prepared with eight circles to separate eight different specimens. The slide was then heat-fixed and stained. Ten oil-immersion fields per specimen were examined. Gram stains were interpreted as positive if they

displayed, within ten fields, the following organisms singly or in combination: gram-negative bacilli, gram-positive cocci or yeast. Negative Gram stains revealed no organisms in ten fields or a predominance of gram-positive bacilli, diphtheroids or organisms morphologically resembling *Gardnerella*.

**Chemstrip LN + Gram stain (LN + smear):** By a combination of strip and Gram stain interpretation, significant bacteriuria was defined as 1) strip positive for LE and nitrite, regardless of Gram stain results; 2) strip positive for nitrite only, regardless of Gram stain results; 3) strip positive for LE only, with positive Gram stain results; and 4) strip negative for both tests but positive Gram stain results. Insignificant bacteriuria by LN + smear was defined as 1) negative LE, nitrite and Gram stain or 2) positive LE but negative nitrite and Gram stain.

## Results

Using a criterion of  $\geq 10^4$  CFU/mL, 172 (17%) of the 1,000 specimens processed showed significant bacteriuria by culture. The Chemstrip LN alone indicated 299 (30%) specimens positive for bacteriuria while the LN + smear method reduced the number of positives to 192 (19%) (Tables 1 and 2).

**Table 1. Evaluation of 1,000 Urines by Culture, Chemstrip LN and LN + Smear.**

Methods	Bacteriuria			
	Insignifi- cant	Signifi- cant	False- negatives	False- positives
Culture	83% (828)	17% (172)	0	0
Chemstrip LN	70% (701)	30% (299)	6% (40/701)	56% (167/299)
LN + Smear	81% (808)	19% (192)	2% (20/808)	23% (44/192)

**Table 2. Evaluation of 1,000 Urines by Chemstrip LN + Gram Stain.**

Leukocyte esterase	Nitrite	Gram stain	CFU/mL		Culture negative	Total
			$\geq 10^4$ , < $10^5$	$\geq 10^5$		
+	+	+	1	53	4	58
+	+	-	0	1	2	3
+	-	+	7	55	25	87
+	-	-	6	0	136	142
-	+	+	0	9	0	9
-	+	-	0	0	0	0
-	-	+	4	16	15	35
-	-	-	17	3	646	666
Totals			35	137	828	1000

Using conventional culture as the reference method, the Chemstrip LN resulted in a 56% (167/299) false positive rate and a 6% (40/701) false negative rate. Incorporation of Gram stain reduced the false positive error to 23% (44/192) and the false negative error to 2% (20/808). Therefore, addition of a Gram stain to the Chemstrip LN method significantly

decreased both false-positive and false-negative error (by 59% and 67% respectively) and permitted savings of culture media, incubator space and time for processing of negative specimens.

The strip alone produced 77% sensitivity, 80% specificity, 44% predictive value of a positive test, and 94% predictive value of a negative test when the criterion for a positive culture was  $\geq 10^4$  CFU/mL. The LN + smear method resulted in 85% sensitivity, 94% specificity, 76% positive predictive value, and 97% negative predictive value using the same culture criterion (Table 3).

If the criterion for significant bacteriuria is changed to  $\geq 10^5$  CFU/mL, the statistics for the Chemstrip LN alone are altered as follows: sensitivity increases to 86%, specificity decreases to 71%, positive predictive value decreases to 39%, and negative predictive value increases to 97%. For the LN + smear method, the sensitivity is 97%, specificity is 75%, predictive positive value is 74.4%, and predictive negative value is 99.6% (Table 3).

**Table 3. Chemstrip LN vs Chemstrip LN + Smear.**

	Chemstrip LN		Chemstrip LN + Gram stain	
	CFU/mL		CFU/mL	
	$\geq 10^4$	$\geq 10^5$	$\geq 10^4$	$\geq 10^5$
Sensitivity	77%	86%	85%	97%
Specificity	80%	71%	94%	75%
Predictive value of a pos.	44%	39%	76%	74.4%
Predictive value of a neg.	94%	97%	97%	99.6%

## Discussion

According to the literature and the Chemstrip LN package insert, significant bacteriuria is indicated if LE, nitrite or both tests are positive.<sup>5,6</sup> In our study, very high agreement with culture results occurred when both strip tests were positive or when nitrite alone was positive. Of 70 specimens positive for LE and/or nitrite, 64, (91%) produced positive cultures. Due to this high correlation between strip and culture results, there is no need to examine smears of these specimens. One explanation for the six false-positive specimens in this group is the possibility that antimicrobial agents may have been present, thus inhibiting bacterial growth.

When the LE test is considered alone, agreement between strip and culture methods, using  $\geq 10^5$  CFU/mL as the criterion for positive culture, varies (33-55%) with the type of patient population.<sup>4,9</sup> Our results showed 5.7% agreement (13/229) between positive LE tests and cultures producing  $\geq 10^4$  but

<10<sup>5</sup> CFU/mL and 24% agreement (55/229) for positive LE tests with cultures ≥10<sup>5</sup> CFU/mL. Approximately 23% of the total specimens demonstrated strips positive for only LE. If LE alone is used to screen for significant bacteriuria, much time and media (142/1,000) would be wasted processing specimens that yield negative cultures. Incorporation of Gram stain enabled correct prediction that 136 out of 142 LN-positive specimens would be culture-negative, yielding 96% agreement with culture. Six false-negative specimens occurred using the LN + smear method, all producing colony counts between 10<sup>4</sup> and 10<sup>5</sup> CFU/mL. Perry et al<sup>4</sup> experienced a 16% false-negative rate among females and 2% among males using LE to screen for bacteriuria. Infection outside the renal system or acute urethral syndromes due to chlamydial or gonococcal infections produce leukocytes which result in false-positive results.<sup>10</sup> Therefore, the presence of leukocytes in urines (especially in those from females) is not a reliable indicator of bacteriuria.

When both LE and nitrite tests are negative, very high negative predictive values (>95%) are obtained at both ≥10<sup>4</sup> and ≥10<sup>5</sup> CFU/mL. Thus our conclusion is that specimens negative for both strip tests do not require culture. Our data produced a false-negative rate of 6% (40/701) using the Chemstrip LN alone, with ≥10<sup>4</sup> CFU/mL as the criterion for a positive culture. This rate was reduced to 2% (20/808) when Gram stain results were incorporated. Using ≥10<sup>5</sup> CFU/mL as the positive culture criterion, the 2% false negative rate of the LN + smear method is further reduced to 0.5%.

Approximately 90% of the false-negative specimens grew *Streptococcus faecalis*, *Candida* or group B streptococci. If reduction of false-negative error of the strip method is important, concomitant use of Gram stain is recommended. However, the organisms encountered in false-negative specimens are more often seen in debilitated patients or are of nosocomial origin. If the population being screened is largely outpatient or emergency patients, the need to reduce the false-negative error may be negligible. Reasons for false-negatives include the presence of gram-positive organisms or gram-negative organisms which do not reduce nitrate. Dietary deficiencies also contribute. Another factor is human error in reading Gram stains.

Gram stain interpretation is most useful for specimens giving a positive LE only, making the Chemstrip LN + smear a rapid, cost-effective (17¢ plus approximately 3¢ per specimen for smears prepared on slides with eight circles areas) and accurate

method for screening for insignificant bacteriuria. Addition of a Gram stain to the procedure requires only minimal increases in cost and time. A final advantage of adding a Gram stain to the LN strip test is that urine specimens positive for bacteriuria can be inoculated into tryptic soy broth and incubated until the turbidity is adequate (3-4 hours) for performing a Kirby-Bauer sensitivity, thereby enabling colony count, identification and sensitivity results to be reported just one day after receipt of the specimen when a single organism is present.

In our laboratory, all clean-catch urines submitted for culture are screened by the Chemstrip LN + smear method which we have described. Positive specimens are then cultured by calibrated loop technique and inoculated into tryptic soy broth for a Kirby-Bauer sensitivity if the organisms seen on Gram stain are gram-negative rods of a single morphology. The next day colony count, identification and sensitivity pattern are reported. If specimens are negative by LN + smear, results are released the same day as "negative" without performing a culture since the predictive value of a negative LN + smear test is very high (97% or 99.6% at ≥10<sup>4</sup> CFU/mL or ≥10<sup>5</sup> CFU/ml, respectively).

Since conventional testing for bacteriuria has required 24-48 hours by most laboratories and since most physicians are not aware that more rapid, yet reliable, procedures exist, the LN + smear method was slow to gain acceptance by our medical staff. However, after informing our physicians of the new procedure and its benefits and maintaining open communication, this new method has become widely accepted in our institution. All urines other than clean-catch specimens are processed by conventional culture, and we do comply with rare requests to culture a clean-catch specimen in lieu of the LN + smear procedure.

Being faced with DRGs, we feel that the laboratory, too, must assume responsibility to institute methods which provide for cost-containment and rapid turn-around time without compromising the quality of health care. Cost of materials for the LN + smear method is approximately 20¢ per specimen as opposed to approximately 40¢ per specimen for conventional culture. However, our main objective is not cost-reduction for materials but more rapid turn-around time to enable avoidance of unnecessary antibiotic therapy and shortened hospital stay in cases of negative bacteriuria.

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**Ectopic Secretion of Corticotropin-Releasing Factor as a Cause of Cushing's Syndrome: A Clinical, Morphologic, and Biochemical Study.** Robert M. Carey, MD, and Shalendra K. Varma, MD, *Charlottesville*; Charles R. Drake, Jr., MD, *Winchester*; Michael O. Thorner, MD, *Charlottesville*; Kalman Kovacs, MD, *Toronto, Ontario*; Jean Rivier, PhD, and Wylie Vale, PhD, *LaJolla, California*.

Corticotropin-releasing factor, a hypophyseotropic hormone that stimulates adrenocorticotrophic hormone (ACTH) secretion, has recently been isolated, characterized, and synthesized in the sheep and rat. We report on a patient with metastatic carcinoma of the prostate presenting with anterior and posterior pituitary hormone deficiency together with ACTH-dependent Cushing's syndrome. At postmortem examination, large areas of the median eminence and

pituitary stalk were replaced by tumor, but the corticotrophs were markedly hyperplastic. Immunostaining of tumor cells was positive for corticotropin-releasing factor and was negative for ACTH and a wide range of other hormones. Radioimmunoassay and bioassays showed that tumor extracts and further purified fractions were active in corticotropin-releasing factor, and the tumor material coeluted with corticotropin-releasing factor on high-pressure liquid chromatography.

These studies demonstrate that ectopic secretion of corticotropin-releasing factor is a cause of Cushing's syndrome in human beings. The features of this syndrome include hypercortisolism, pituitary corticotroph hyperplasia, elevation of circulating ACTH levels, and failure to suppress the pituitary-adrenal axis with exogenous glucocorticoids. *N Engl J Med* 1984;311:13-20

# VIRGINIA MEDICAL

# EDITORIAL

## A Salute to President Caravati

**T**HE presidency of Dr. Charles Martin Caravati, Jr., brings to The Medical Society of Virginia's highest office a family tradition of dedication to medicine. Son of a distinguished gastroenterologist, he learned early on the rigors that a busy, devoted physician endures. Often he accompanied his father to his office and on his hospital rounds. As a young man he developed the character and stamina characteristic of a good physician. He is honorable, sincere, and trustworthy, and has a sense of concern and feeling for his fellow human beings.

Born on May 9, 1937, in Richmond, the son of Charles M. Caravati, Sr., MD, and the late Mary Virginia Dore Caravati, the 130th MSV President is one of the youngest leaders the Society has had; of the 27 living past presidents, only six were in their forties when they took office. He attended St. Christopher's School and was active in many extracurricular activities, including playing on the varsity football team.

The next eight years of his life were spent at the University of Virginia, where he received his BA degree with honors in 1959. While in undergraduate school he was elected to membership in Phi Beta Kappa and Omicron Delta Kappa. In 1963 he was awarded his MD degree with honors and was elected to membership in Alpha Omicron Alpha.

Following an internship at Barnes Hospital in St. Louis, Missouri, he served two years in the US Public Health Service, stationed in California. Upon returning to Virginia in 1966 he entered the Dermatology Residency Program at the University

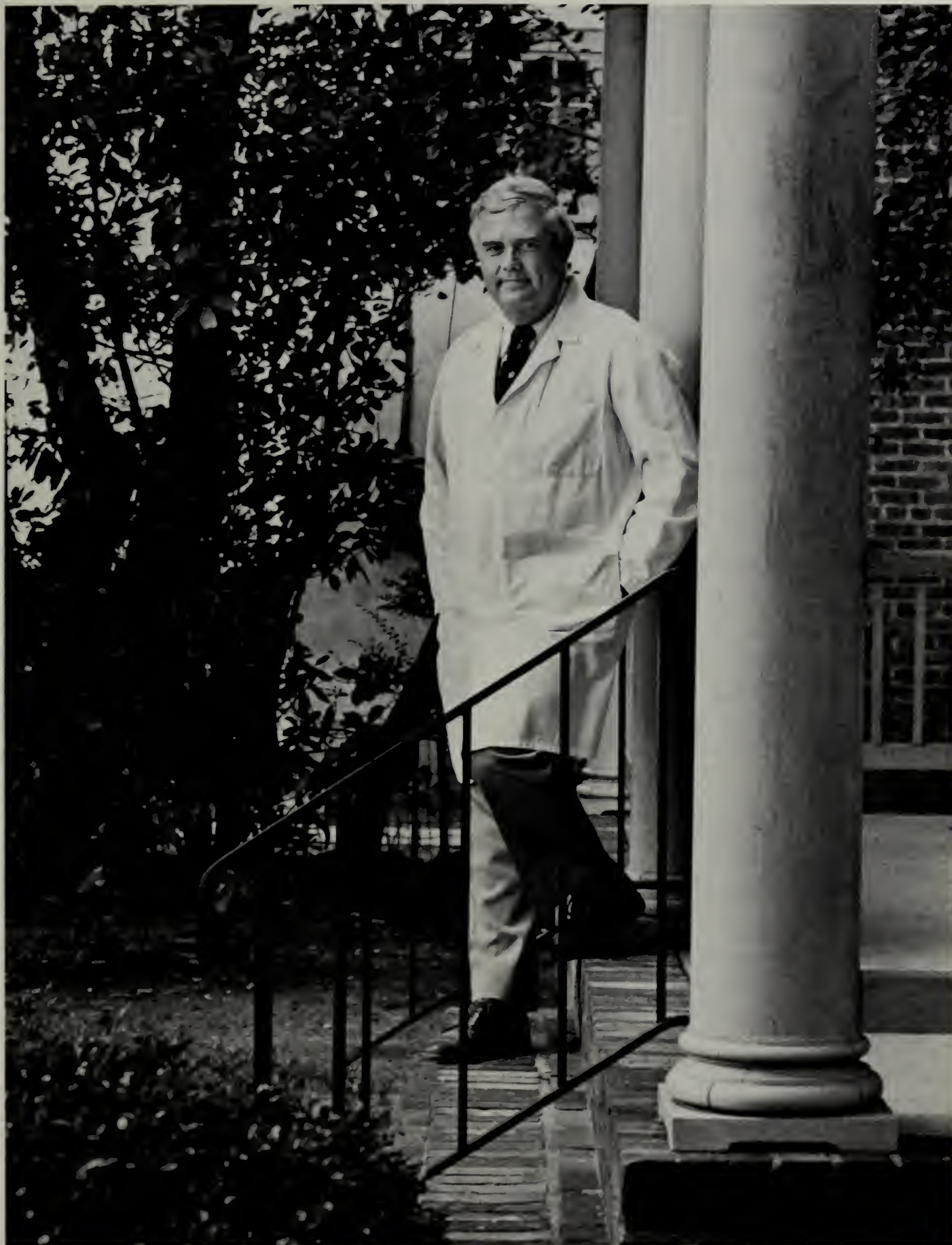
of Virginia and served as chief resident there from 1968 to 1969.

In 1969 he entered the private practice of dermatology in Richmond. This soon became Dermatology Associates of Richmond, P.C., with Drs. L. W. Kelly, Jr., E. M. Hudgins, and L. E. Blanchard III.

Charlie became active in the Richmond Academy of Medicine as soon as he opened his office. He has served on many committees and as chairman of several. His ability as a leader and administrator was soon recognized by his peers and he was elected the Academy's president in 1980. He became chairman of the board of trustees the following year. During this same time he began his service and leadership roles in The Medical Society of Virginia, first serving as vice councilor from the 3rd district in 1974. In 1975 he was elected councilor and served with distinction for six years. Service as an alternate delegate to the American Medical Association began in 1981. He returned to Council in 1984 as President Elect.

Activities in his specialty have included memberships in the Richmond Dermatology Society, Virginia Dermatology Society, and fellowship in the American Academy of Dermatology. He is an associate clinical professor of dermatology at the Medical College of Virginia. He is the author of twelve papers and coauthor of six papers that have been published in leading medical journals.

Charlie and the former Betty Noland were married in 1963. They have three children; Charles M. III, Elizabeth, and Nancy.



Tim Wright

CHARLES M. CARAVATI, JR., MD  
PRESIDENT, 1985-1986, THE MEDICAL SOCIETY OF VIRGINIA

An avid sportsman, Charles finds relaxation in duck and goose hunting in Virginia and in pheasant hunting in Colorado. When time permits he enjoys his beach home in North Carolina, with fishing there and in the Chesapeake Bay.

Concern for the welfare of his fellow man has caused him to become involved in several civic organizations. He is active and has served on the boards of the Richmond Chapter of the American Red Cross, the American Cancer Society, Virginia Chapter, and St. Joseph's Villa. He is a devoted alumnus of the University of Virginia, especially as a strong supporter of the basketball team. It is said that he has a secret inside track to the mind of coach Terry Holland.

Dr. Caravati has earned through hard work, dedication and enthusiasm the respect of his peers. His knowledge of problems facing organized medicine will enable him to provide the continuation of the high quality of leadership that The Medical Society of Virginia has enjoyed since 1821. He will bring honor to himself and to The Medical Society of Virginia.

PERCY WOOTTON, MD

7601 Forest Avenue  
Richmond VA 23229

## Goodbye, Harry; Hello, Charlie

**I**T is that time of year again, occasion of the inauguration of the President of the Medical Society of Virginia. Harry Kuykendall, MD, is stepping down, and Charles M. Caravati, Jr., MD, assumes the reins.

A complete listing of achievements during Harry Kuykendall's presidency will not be attempted, but particular plaudits are due for the capstone: his address delivered on the occasion of the annual Congressional Luncheon given by The Medical Society of Virginia.<sup>1</sup> The address was a masterpiece, a beautiful summation and analysis of the problems created by the rising cost of medical care in the United States. Naturally, it was well received.

Along with progress in areas already begun, there were innovations: the first two-day in-depth council meeting; the launching of The Medical Society of Virginia's unified membership campaign; and the creation of two subsidiary corporations of the Society (the Medical Society of Virginia Service Corpo-

ration, a for-profit arm, and the Medical Society of Virginia Foundation, a tax-exempt corporation).

And now comes Charles Caravati, our new President, a man of recognized capability and industry, qualities which were most recently exemplified in his chairmanship of the committee to study the disciplinary function of the State Board of Medicine. There will be more to come.

It has been a good year for the Medical Society of Virginia. Well done, Harry! Welcome, Charlie!

EDWIN L. KENDIG, JR., MD

1. Kukendahl, HC: "Rationing," said the plain-spoken doctor, "that's the bullet you'll have to bite." *Va Med* 1985;112:418-419

## It Was A Short Summer

**T**HE summer of 1985, in retrospect, seemed much shorter than the summer of 1984. But then, all seasons seem shorter to me now.

As I write this, my garden is dying, with no more tomatoes or beans and with the potatoes and parsnips waiting to be dug. The woods will soon have bare limbs and the asparagus will be yellow. My asparagus enjoyed the spring by sending up innumerable joyous sprouts while during the summer the roots gained strength for the coming winter for the maturing plants. And now it is ready.

Nature takes the change in season very gracefully while preparing for the winter. But people do not, worrying so much about winter in the spring and summer of life that they are constantly discontent and anxious, all the while searching for the miracle skin cream and hair restorer. They're so fearful of the winter of their lives that they never enjoy their spring nor its phasing into summer. They want to appear as constant spring, not realizing that a full-leaved tree will snap its limbs at the first snow or ice storm.

There is no need to wither as do the plants, but much can be said for enjoying our seasons. Contrary to the television advertisements I want to be able to tell mother and daughter apart, for they are parent and child, not rival siblings.

There is much more honor in aging gracefully than in striving for eternal youth. And when I approach 90, I shall try to start to age gracefully.

HENRY S. CAMPELL, MD

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# VIRGINIA MEDICAL OBITUARY

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## Kurt Hirsch, MD

Dr. Kurt Hirsch, retired physician who had practiced surgery in Norfolk and Franklin for 34 years, died July 13. A graduate of the medical school of the University of Freiberg, in Germany, Dr. Hirsch also studied at the Universities of Berlin, Munich, and Hamburg and trained at the Jewish Hospital in Berlin. He was a long-time member of the Norfolk Academy of Medicine, The Medical Society of Virginia and the American College of Surgeons.

He was an ardent church supporter, Rotarian, and sportsman. He had a zest to live; he added zest to the lives of others.

In the charming adult fairy tale *The Velveteen Rabbit*, the old horse tells the rabbit: "Once you are loved you become real. Once you are real you can never become unreal again. It lasts forever." As long as there remain those countless people who loved Bill Smith, he will remain a real force in our lives and in our community. He lives on in us—those who cared for him, trusted him, laughed with him, cried with him, but above all, loved him.

## Memoir of W. C. Smith 1918-1985

By John Barry Sherry, MD

Dr. William Crenshaw Smith died unexpectedly while attending a meeting of his specialty, pediatrics, at Williamsburg, Virginia, on February 25, 1985, in his 67th year. Dr. Smith had practiced in Waynesboro since December 11, 1948. Bill was the beloved doctor of many children and many grown children, and trusted friend and advisor to many patients who had not known his gentle and loving care when they were children. To his colleagues he was a storyteller, a jovial friend who was able to see the bright side, even when things looked black, and a friend and peer whose opinion was valued.

From the time he joined the medical staff of the Waynesboro Community Hospital until 1960, he held the fort as the sole pediatrician in Waynesboro and indeed was one of the first in Augusta County. He attended medical school at Duke University. After graduation he learned his specialty at Watts Hospital in Durham, North Carolina. He also spent a brief period on the teaching staff of George Washington Medical School, St. Louis.

Not only did "Dr. Bill" know how to deal with other people's children, but he and his wife, Audrey, lovingly and capably encouraged their daughter Sharon and son Lynn. Sharon is a specialist in computer technology. Lynn is practicing his specialty of internal medicine with his wife, who is also an internist, in Lewisburg, West Virginia.

## Memoir of Harold Nemuth 1912-1984

By Nicholas Tulou, MD, Harry Easterly, III, MD,  
and Kenneth Olshansky, MD

Dr. Harold Nemuth died on December 8, 1984, to the sorrow of his family, friends and colleagues.

He was born in Norfolk, Virginia, in 1912. He grew up in Portsmouth, where he attended public schools. Because he was too young to enter Columbia University, he went to sea with the United States Merchant Marine and traveled widely. He graduated from Columbia in 1934, excelling in his studies while holding down jobs with the New York Times and with the Davidson Transfer Company. Though lacking money for tuition, he was determined to enroll in the Medical College of Virginia for the study of medicine and matriculated in 1935 by working as a janitor, laboratory technologist, extern, and student instructor in freshman pharmacology.

After graduation in 1939 he took postgraduate training at MCV, Bellevue, Sheltering Arms and St. Elizabeth's hospitals. Although he had been declared 4F, Dr. Nemuth volunteered for overseas military duty in 1942 and served with distinction in both the European and Pacific theaters of war; in so doing he was awarded two Purple Hearts, two commendations, two presidential unit citations, and 11 battle stars. In 1946 he returned to Richmond to start a private practice.

Over the next 40 years Dr. Nemuth demonstrated the qualities that he had developed in his early life and training. His industry was apparent in the long hours he spent caring for his patients; he did this without concern for remuneration, or his comfort and needs. His patients could count on his attention, whenever they needed it.

Dr. Nemuth involved himself in the activities of MCV, often without compensation. He was an instructor in pharmacology, medicine and preventive medicine. He proctored many medical student observers in his private practice. He helped to organize the MCV screening clinic and directed it from 1954-1962. He was acting chairman of preventive medicine from 1959-1962. Recognition of his selfless efforts and energy resulted in appointments as clinical professor of preventive medicine and as emeritus professor of medicine. In 1979 he was appointed to the board of visitors of Virginia Commonwealth University, and he was vice rector at the time of his death.

The medical community outside MCV also benefited from his attention. He supported all Richmond hospitals as an active staff member, and he cheerfully served on numerous committees. He was elected vice president of the Richmond Academy in 1969-1970, and became vice president of The Medical Society of Virginia in 1970-1971. He chaired VaMPAC in 1977-1979. He was an active member of the Royal Society of Health, Virginia Academy of Science, Virginia and American Public Health Associations, Industrial Medical Association, American Geriatric Society, and the International Gerontological Society.

Dr. Nemuth was a member of Temple Beth Ahaba. He served on the board of the Beth Shalom Home of Virginia. He was a member of the Governor's Commissions on Aging, Drug Abuse, and Human Resources Priorities. He was a devoted, long-term board member of the Instructive Visiting Nurses Association. In 1979, because of his considerable service to the Commonwealth and because of his great interest in Virginia Military Institute, he was honored by being elected one of only five honorary alumni in the history of the Institute.

As memorable as these accomplishments and honors are, his acquaintances remember something more precious. Dr. Nemuth had kindness that he directed to everyone. His generosity was almost literally to a fault. His charm and wit cheered all around him, and, as a result, it remains difficult to go anywhere in Richmond, the USA, and for that matter, in the world, without finding someone who fondly remembers "Hal."

## Memoir of T. E. Donnelly 1930-1985

*By Harry I. Johnson, Jr., MD,  
Douglas Pierce, MD, and Philip T. Shiner, MD*

Thomas E. Donnelly died February 2, 1985, at his home in Roanoke. The acute shock of his sudden death was felt throughout the Roanoke Valley, not only by his professional colleagues but by the entire community.

Tom Donnelly was born on April 29, 1930, in Appalachia, Virginia. He was the son of Thedford Orr Donnelly and Mary Catherine Duffy Donnelly. His family moved to Bristol, Virginia, where he spent his early days. He graduated from Emory and Henry College in 1952, and as was characteristic of his personality, he remained intensely loyal to the college throughout his life. In 1958 he graduated from the Medical College of Virginia.

After completing his internship at Roanoke Memorial Hospital, he returned to Richmond, Virginia, where his residency in internal medicine and his fellowship in diabetes and endocrinology were completed at the Medical College of Virginia. Returning to Roanoke, Dr. Donnelly began the practice of general internal medicine in 1962, and in the years of his practice earned the respect and admiration of his colleagues. He was a member of the active staff of Roanoke Memorial Hospital, where he had served as chief of medicine, and was on the courtesy staff at Community Hospital of Roanoke Valley.

His many past offices included: president of the Southwestern Virginia Medical Society; secretary-treasurer of Virginia Society of Internal Medicine; delegate to The Medical Society of Virginia; and vice-president of the Roanoke Academy of Medicine. At the time of his death he was the medical director of Shenandoah Life Insurance Company.

In 1957 Tom married Mary Frances Mettert, and he was justly proud of their two fine children, Mary Catherine Donnelly and Thomas Edward Donnelly, Jr. In addition to his wife and children, he is survived by his mother.

He will be remembered as a devoted husband and father, a compassionate and caring clinician, a friend and companion who has touched the lives of all of us privileged to know him. Thomas E. Donnelly was a physician that all of us have aspirations to equal.

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### KEY TO ABBREVIATIONS

b—book reviews	*—medical article
cr—committee report	mb—medibytes
ed—editorial	nb—news bureau
h—history	pv—point of view
le—letter to editor	s—speech
m—memoir	sa—special article
ww—who's who	

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 FERGUSON, C.B. 786\*  
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 GARRETTSON, L.K. 585-ed  
 GELFMAN, D.M. 631\*  
 GIBBS, L.H. 127-m  
 GILLENWATER, J.Y. 182\*  
 GOLDSTEIN, G. 509\*  
 GOOLSBY, A.C.III 502-sa, 718-sa  
 GRAY, A. 3-nb, 142-nb, 146-mb,  
 188-mb, 415-mb  
 GRINNAN, R.B. 458-m  
 GUERRANT, J.L. 659-m

### H

HALL, S.III 108\*  
 HAUN, E.C. 694-le  
 HAWKINS, R.F. 328-m, 513-m  
 HAZRA, T.A. 46\*, 244\*  
 HEINE, G. 310-sa  
 HERRING, H.L.,JR. 459-m  
 HILL, W.R. 459-m  
 HIXON, D.L. 786\*  
 HORSLEY, J.S.III 54-h  
 HOTCHKISS, W.S. 494-pv  
 HOYT, R.R. 36\*  
 HULVEY, J.T. 646-cr

### J

JENKINS, A.D. 182\*  
 JENNY, L. 711\*  
 JOHNS, T.N.P. 513-m  
 JOHNSON, H.E.,JR. 794-m  
 JOHNSTON, C.L.,JR. 316\*  
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### K

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 326-ed, 457-ed, 616-ed, 655-  
 cr, 657-ed, 727-ed, 792-ed  
 KERSH, C.R. 42\*  
 KESLER, R.W. 450-sa  
 KLEIN, F.A. 444\*, 782\*  
 KOONTZ, W.W.,JR. 189-ed  
 KRAVITZ, P. 74-le  
 KUYKENDALL, H.C. 418-s  
 KULUND, D.N. 565\*

## L

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LAWRENCE, D.A. 693-le  
LAWRENCE, W.,JR. 252-ed  
LEE, H.M. 189-ed  
LOBO, P.I. 178\*  
LOHR, J.A. 450-sa  
LYNCH, J.P. 102-sa

## M

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MARTIN, J.A. 658-m  
MATHIS, J.M. 183\*, 344\*  
MAURER, H.M. 252-ed  
McAVENEY, W.J. 643-cr  
McCAUSLAND, A. 126-m, 653-cr  
McCUNE, F.K. 653-cr  
McKEOWN, C.E. 587-m  
McLEAN, W.C. 659-m  
MELAMED, M.R. 782\*  
MILANOVICH, R.A. 125-m  
MILLS, A.S. 630\*  
MONROE, W.M. 327-ed  
MOORE, J.L.,JR. 640-cr  
MORRIS, W.H.,JR. 659-m  
MOSS, J.M. 621-le  
MOSS, M.L. 385\*  
MUIZELAAR, J.P. 374\*  
MUNOZ, A.J. 654-cr

## N

NELSON, C.M.K. 388-s  
NELSON, K. 727-ed  
NIPE, G.M. 141-le, 645-cr  
NIRSCHL, R.P. 656-cr

## O

O'CONNELL, J. 239-sa  
OGDEN, W.D. 125-m  
OLSHANSKY, K. 191-m, 793-m  
OWEN, D.S.,JR. 498-pv  
OWEN, J.A.,JR. 501-pv  
OWENS, B.H. 458-m

## P

PAINTER, J.S. 323-le  
PARK, C.H. 786\*  
PATTERSON, J.L.,JR. 654-cr  
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PERLMAN, J.D. 459-m  
PIERCE, D. 794-m  
PLATT, J.L. 513-m

## R

REID, D.W. 117\*  
REINA, A. 459-m  
RICHARDS, N.G. 123-ed  
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## S

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SMITH, M. 251-m  
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SULLIVAN, T.J. 191-m

## T

TEMPLE, T.E. 642-cr  
THOMPSON, S.L. 328-m  
THOMPSON, W.T.,JR. 121-ed  
THORUP, O.A.,JR. 501-pv  
TULOU, N. 793-m  
TUCKER, W.T. 513-m

## WYZ

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